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THE UNIVERSITY OF ALBERTA

LOCUS OF CONTROL, PERSONALITY, AND PREFERENCE FOR  
THERAPY OF ALCOHOLICS: AN EXPERIMENTAL STUDY

by



JOHN MALCOLM MITCHELL

A THESIS  
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH  
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THE UNIVERSITY OF ALBERTA  
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The undersigned certify that they have read, and  
recommend to the Faculty of Graduate Studies and Research,  
for acceptance, a thesis entitled . . . . .  
. . . Locus of Control, Personality, and Preference for . .  
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. . . . .  
submitted by John Malcolm Mitchell . . . . .  
in partial fulfilment of the requirements for the degree  
of Master of Education.





TO MY PARENTS





## ABSTRACT

The purpose of the study was to examine the relationship between internal-external locus of control, of alcoholic clients, three dimensions of personality, and the relationship these have with preference for therapy. Three groups of people representing a total of 67 subjects completed the pre and post-tests. Groups 1 and 2 were experimental groups who were participating in a 28 day and 21 day treatment program at Henwood. Group 3 was a control group that included individuals who were participating in non Henwood treatment programs. Subjects were asked to complete three different tasks on two different occasions. These tasks consisted of (a) completion of Rotter's internal/external locus of control scale, (b) completion of the California Psychological Inventory, and (c) viewing a videotape of a directive and non-directive therapist and choosing which therapist they would have preferred. A significant difference was found between male and female scores on the sense of well-being scale of the CPI. Male subjects exhibited a greater sense of well-being and subjects in the study were found to be more external and tended to favor the directive therapist. The study also found that there was a significant difference within groups for locus of control,



dominance, sociability, and sense of well-being. The results indicated that there were no significant differences between the experimental and control groups on the pre or post-test measures. Recommendations for further study were made.





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## CHAPTER I

### THE NATURE OF THE STUDY

#### Statement of the Problem

According to Pattison (1976):

Historically, the development of alcoholism rehabilitation programs was based on the assumption that there was one population of alcoholics to be treated by one best method, resulting in one therapeutic outcome. This is too simplistic a model, because as evidence to be discussed demonstrates, there are major differences in alcoholic subpopulations, major differences in treatment outcome. (p. 589)

The writer along with Pattison (1976) disagrees that there is one best method of treatment for every alcoholic. Instead one must try to match the treatment or therapy to the individual who is seeking help. The above quotation refers to the fact that for purposes of treatment we have tended to place all alcoholics into one homogeneous population. Further to this, treatment specialists have espoused one treatment method as being best for everyone. Hence, outcome will also be the same for all alcoholics, assuming they are motivated. This one best method according to Pattison (1976) is responsible for the "competitive monolithic" approach to therapy where programs present themselves as the one and only answer.

Before one can begin to match clients to therapy there



must be some way to distinguish between subpopulations of clients who enter treatment programs. We need to, more carefully, define the nature of our treatment population before an appropriate treatment can be decided upon. One way of identifying aspects of this treatment population is to make use of the internal/external locus of control formulation advanced by Rotter (1966).

This study proposes to examine the relationship between internal/external locus of control, three dimensions of personality and the relationship these have with preference for therapy of alcoholics who are registered in a 28 day treatment program. More specifically this study explores the effect of a particular therapeutic approach on subjects identified as having high and low locus of control and subjects who are high or low in sense of well-being, dominance, and sociability.

### Definition of Terms

1. AADAC refers to the Alberta Alcoholism and Drug Abuse Commission. AADAC is the Alberta government agency which is responsible for the treatment and prevention of drug and alcohol abuse.

2. HENWOOD. Henwood is an in-patient treatment centre for drug dependencies including alcoholism, operated by the



Alberta Alcoholism and Drug Abuse Commission.

3. ALCOHOLIC. For purposes of the present study an alcoholic will be any individual who has been referred to a centre for the treatment of a drinking problem.

4. LOCUS OF CONTROL. "The locus of control construct is an integral part of social learning theory (Rotter, 1954). It refers to the degree to which individuals perceive the events in their lives as being a consequence of their own actions, and thereby controllable (internal control), or as being unrelated to their own behaviors and, therefore beyond personal control (external control)" (Lefcourt, 1972, p. 2). I-E refers to internal/external.

5. Three personality variables.

a) Dominance (Do) "To assess factors of leadership ability, dominance, persistence, and social initiative" (California Psychological Inventory Manual, 1957, p. 12).

b) Sociability (Sy) "To identify persons of outgoing, sociable, participative temperament" (CPI Manual, 1957, p. 12).

c) Sense of well-being (Wb) "To identify persons who minimize their worries and complaints, and who are relatively free from self-doubt and disillusionment" (CPI Manual, 1967, p. 12).





6. The treatment approaches are defined as directive and non-directive as portrayed in two films selected for purposes of the study. The two films are the Rogers and the Ellis films which are part of the "Three Approaches to Psychotherapy." Only the interview portions of the films have been selected for the study.

#### Purposes of the Study

1. Male and female alcoholics who are registered in a 28 day treatment program will fall into distinct subgroups (internal/external) based upon locus of control, dominance, sociability and sense of well-being. If so, this would suggest an important means of matching these clients to treatment.

2. Male and female alcoholics registered in a 28 day treatment program who score higher on the external scale (their scores will fall within the external end of the distribution) will score lower in sense of well-being, dominance, and sociability.

3. On a task requiring clients to choose between two therapies, those scoring high or low of the Rotters I-E scale will show a noticeable difference in their choices. Those scoring high will tend to choose the more directive approach and those scoring low will choose the more



non-directive approach.

4. Between pre and post tests there will be a significant difference between those identified as scoring high and low on Rotter's I-E scale and those scoring high and low in sociability, dominance, and sense of well-being as defined by the CPI.

#### Delimitations of the Study

The present study will focus upon two groups of alcoholics who have been admitted and who are on the waiting list for the Henwood treatment program. This study does not propose to match clients to treatment as a result of the data generated nor will it evaluate alcoholics who are registered in other AADAC programs. If it appears unfeasible to draw the control group exclusively from patients on the Henwood waiting list then this group will be drawn from other AADAC facilities located in the Edmonton area. One should be aware that any group of patients acting as a control for this study will have been exposed to some prior treatment experience at other AADAC facilities. This would also be true for the experimental group.

The patients in this study are treated as a population rather than as a sample. That is, the alcoholics in this study were not randomly selected, consequently any attempt



to generalize the findings to all alcoholics should be done with caution.

### Organization of the Thesis

Chapter one has described the nature of the study and outlines the purposes. Chapter two reviews the related literature and research with reference to alcoholism, alcoholism and locus of control, and locus of control and personality. Chapter three outlines the design of the study and Chapter four presents the findings of the research. Chapter five explores some of the theoretical implications of the findings for further research.





## CHAPTER II

### REVIEW OF RELATED LITERATURE AND RESEARCH

#### Introduction

Probably since man first learned to ferment certain fruits and grains society has experienced the frustration of trying to cope with the practices of individuals who drink them. Over the years the problems associated with excessive use of alcoholic beverages have tended to increase. The extent of the problem is obvious when one considers some statistics from the final report of the Ledain Commission.

A 1969 study of alcohol involvement in fatal motor vehicle accidents in three Canadian provinces presented findings similar to those reported regularly across North America: approximately 70% of drivers killed in single vehicle accidents and 50% of drivers killed in multi-vehicle collisions had been drinking. Among all driver fatalities, alcohol was detected in the blood of 60% to 70% of those considered responsible for their own deaths. (Le Dain, 1972, p. 393)

Ledain also associates alcohol with a number of other medical and social problems. These include: more than 50% of the pedestrian deaths from traffic accidents; fatal aviation crashes, rail crashes, home and industrial accidents, 65% of liver cirrhosis deaths; 16% of psychiatric admissions and 25% of attempted suicides; 39% of the rapes and 42% of other sexual offences. As well, there are approximately



2½ million convictions annually for such offences as drunkenness, violations of liquor control laws, and impaired driving.

Marc Lalonde has estimated that the harmful consequences of alcohol use cost Canadians more than 1 billion 100 million dollars per year. This figure is further broken down into 500 million for alcohol-related motor vehicle accidents, 350 million to direct health costs based upon hospital admission, and finally other costs attributable to court costs and costs relative to business and industry.

#### The Problem (Extent of Alcoholism in Canada)

Figures published by Ontario's Alcoholism and Drug Addiction Research Foundation in 1967 and 1976 indicate that there has been a steady increase in our alcoholic population from 1951 to 1973.

	Canada's Alcoholic Population	Rates per 100,000 Aged 20 and over
1951	132,260	1,520
1964	255,250	2,310
1971	420,900	3,200
1972	474,700	3,600
1973	525,400	3,850

As can be noted from the above figures in the 13 year



period from 1951 to 1964 there was an increase of 122,990 in the alcoholic population. This represents an annual increase of 9,460. In the twenty year period from 1951 to 1971 Canada's alcoholic population increased by 288,640. This represents a mean increase of 14,432 per year. When one compares the two average annual increases this represents a 65% increase.

The above figures were based upon a formula arrived at by E. M. Jellinek. The Ontario Foundation notes in their 1976 report that "although the method is open to question from many points of view, studies to date indicate that it is more likely to underestimate than to overestimate the prevalence in a given area" (p. 61).

From the above statistics it is apparent that Canadians suffer a great many consequences resulting from their excessive use of alcoholic beverages. This lends credence to the need for better and more effective treatment programming. By indicating ways of identifying subpopulations of alcoholics this may assist in the identification of more effective treatment approaches. This appears to conform to the recommendations of the Ledain Commission in the 1972 treatment report.





If we are to offer really effective treatment services for alcoholics, we will need to have:

1. clearer formulation by individual researchers and by the medical-rehabilitative communities, of treatment goals based not on certain routine assumptions - for example, that only total abstinence must be aimed at under all circumstances - but on a careful and individualized assessment of each alcoholic's needs in the context of his history, environment, interpersonal relationships and personal assets and liabilities.

2. a variety of treatment modalities available to meet the specific needs of individual patients. (p. 52)

It seems significant to note that nowhere in the treatment report is there a definition of the term alcoholism. This could have been due to space requirements but more likely it reflects the lack of agreement among researchers over the meaning of this term.

### Alcoholism Defined and Etiological Models of Alcoholism

The controversy over the definition of alcoholism appears to be illustrated by Hawkins (1972) who writes:

Everyone considers alcoholism to be an undesirable condition but its nature, like that of schizophrenia and drug addiction, is highly disputed. Some maintain that it is a physical disease, others consider it to be a moral failing and others say it is a psychological disturbance. It has also been identified as a social problem, an impairment, a faulty mode of family interaction or an



inexplicable result of that pleasant activity, social drinking. (p. 1)

Chafetz (1972) indicates "there is no formal definition of alcoholism or of an alcoholic person which is universally, or even generally accepted" (p. 9). According to Kessel and Walton (1965):

Some define the alcoholic from the vantage point of the sufferer; they name as an alcoholic the person who recognizes that he has to stop drinking but cannot do so. Others have focused on the observable consequences of uncontrolled drinking; they define an alcoholic as a person whose drinking has caused increasing problems in his health, his domestic or social life or with his work. Others emphasize the quantity of alcohol consumed and the pattern of drinking habits; only the man who regularly drinks till he is helpless is an alcoholic from their point of view. (pp. 15-16)

To add to the confusion over the meaning of alcoholism many writers have used other concepts as synonyms for alcoholism. Some of these have been noted by Chafetz (1967) and include alcohol addict, chronic alcoholic, abnormal drinker, problem drinker, and pathological alcoholic.

Jellinek (1941) in attempting to clarify what is meant by alcoholism refers to five types of alcoholic which he designates Alpha, Beta, Gamma, Delta, and Epsilon alcoholism. Alcoholics are also distinguished in terms of addiction and



non-addiction. Jellinek's five species of alcoholism have not been widely used by the scientific or lay public; instead the more global singular definitions seem to be more popular.

The Alberta Alcoholism and Drug Abuse Commission (previously known as The Division of Alcoholism and the Alcoholism Foundation), has for many years used the following definition in their Information Series. "Alcoholism exists when a person's drinking is creating increasingly serious problems in the major areas of his life--domestic, social, and vocational." In addition reference has frequently been made to three other popular definitions. These include the following:

1. The World Health Organization.

Any form of drinking which in its extent goes beyond the traditional and customary dietary use or the ordinary compliance with the social drinking customs of the whole community concerned, irrespective also of the extent to which such etiological factors are dependent upon hereditary, constitutional or acquired physiopathological and metabolic influences. (Strachan, 1968, p. 40)

2. The American Medical Association's definition.

Alcoholism is a disease which is characterized by a compulsive drinking of alcohol in some form. It is an addiction to alcohol. The drinking of alcohol





produces continuing or repeated problems in the patient's life. (Strachan, 1968, p. 40)

3. Drs. Morris Chafetz and H. W. Demone, Jr.

We define alcoholism as a chronic behavioral disorder which is manifested by undue pre-occupation with alcohol to the detriment of physical and mental health, by a loss of control when drinking has begun (although it may not be carried to the point of intoxication) and by a self-destructive attitude in dealing with personal relationships and life situations. Alcoholism, we believe, is the result of disturbance and deprivation in early infantile experience and the related alterations in basic physiochemical responsiveness; the identification by the alcoholic with significant figures who deal with life problems through the excessive use of alcohol; and a sociocultural milieu which causes ambivalence, conflict, and guilt in the use of alcohol. (1972, p. 9)

Since there is such diversity of opinion with respect to definitions it would seem to follow that there would also be a great many theories when it comes to the causes of alcoholism. This is most certainly the case as will become obvious from the next section.

Etiological Models of Alcoholism.

Models of alcoholism can be divided into two large categories, the unidimensional models and the multidimensional models. According to Albrecht (1973) "a unidimensional model can be understood to be one that attends to only one





aspect of a process or it can be viewed as one that focuses upon a single path of a variety of possible paths to a certain outcome" (p. 19). This type of model assumes that all alcoholics follow the same route to eventual alcoholism. The multidimensional model assumes that different types of alcoholism exist and that the paths to eventual alcoholism can vary from individual to individual.

1. Unidimensional. Siegler (1967) has outlined eight unidimensional models. The first four "have been derived from explanations that lay people have given for the phenomenon of alcoholism" (p. 573). The last "four were derived from the views of professional people" (p. 573).

a) The impaired model. This model presents the alcoholic as a very "dirty, repulsive individual" who has no hope of recovery--"once a drunk always a drunk." He is looked upon as a social outcast and is given little or no assistance by his fellow human beings. The etiology seems unclear with proponents saying, "some people are just that way."

One gets the impression from this model that the "drunk" is male. How would they explain the female alcoholic?

b) The "dry" moral model. Epitomized here is the view of the extremely religious person who feels that



alcoholism is a "moral weakness." According to this model anyone who drinks runs a high risk of developing a drinking problem. The attitude of the Women's Christian Temperance League was typical of this philosophy. This group believes alcohol to be inherently sinful, that it brings out the worst in people. Those supporting this model believe no one should be tempted by the "forbidden alcohol."

Difficulties with this model include a lack of objectivity (making it difficult to argue with) and an assumption that the etiology of alcoholism is the same for everyone. The possible individuality of those affected is not considered. One path is followed as the problem develops and there is one solution for treatment.

c) The "wet" moral model. This model differs from the previous two primarily in the attitude assumed by "society." Previously, society was considered puritan and one would never see alcohol touch their lips. In contrast, society, according to this view, does drink but does so in a "happy and congenial manner." The etiology of alcoholism is considered to be "a mystery." There appears to be some movement in the direction of trying to understand the problem.

The social stature of the alcoholic appears to have



improved in this model. Whereas, previously he was seen as dirty and repulsive now his is described as "antisocial" or as one who "spoils social occasions." There seems to be an attempt, within this model, to see the alcoholic as being a human being.

d) The Alcoholics Anonymous Model. One could almost presume that these models were arranged in a chronological order from the most elementary viewpoints (of a number of years ago) to the more objective viewpoints of today. This might be possible were it not for the fact that some of these attitudes still exist.

Very often certain segments of society espouse one viewpoint to the exclusion of others. Alcoholics Anonymous has certainly been no exception. This is not meant to downplay the very effective role that A.A. plays when it comes to helping the alcoholic, however, it should be noted that many in this organization view the approach with such fanaticism that they strongly reject approaches which appear to differ from their own.

The A.A. viewpoint certainly deserves more attention than the preceding three models because this organization has done more than any other to shape our attitudes towards alcoholism. According to Kissin (1977) "The A.A. model is





not generally considered as a public health model but in truth constitutes one of the major treatment systems in the country" (p. 40). While praising the effectiveness of A.A. Kissin notes the "deficiency of professionalism." Because of this, "the prescribed pattern of behavior is rigidly defined with little allowance for individual variability" (p. 41). This attitude is clearly stated in the A.A. Big Book (1955): "Rarely have we seen a person fail who has thoroughly followed our path" (p. 58). Any failures according to this philosophy can be explained in that they failed to follow the prescribed plan for success. So pervasive is the influence of A.A. that it prompted Jellinek (1960) to write the following suggestion to the student of alcoholism:

In spite of the respect and admiration to which Alcoholics Anonymous have a claim on account of their great achievements, there is every reason why the student of alcoholism should emancipate himself from accepting the exclusiveness of the picture of alcoholism as propounded by Alcoholics Anonymous. (p. 34)

More specific information regarding this model is presented by Siegler (1967). According to the A.A. viewpoint the alcoholic has an incurable disease which can be arrested but never cured. The disease is progressive. Etiology according to the A.A. viewpoint has been noted by Siegler (1967):



Alcoholics are emotionally impaired people who drink to compensate for their inadequacies and then, because of their body chemistry, become addicted to alcohol creating a circular process of further inadequacy and further drinking. (p. 577)

This is the first of the four models presented which attempt to identify some specific reasons why the alcoholic drinks. We see the implication of possible psychological factors which later combine with biochemical ones to create the person's problems. Some might argue that the view on etiology which is presented is truly an A.A. viewpoint. This may be attributed to the fact that within A.A. they rarely look for causes (these are often considered to be excuses) but instead look for ways of keeping their members sober.

The next four models are based upon the views of professionals and include the psychoanalytic model, the family interaction model, the "old" medical model, and the "new" medical model.

e) Psychoanalytic Model. According to this model: "Alcoholism is the symptom of a deep, underlying neurosis. Alcoholics are addictive personalities" (Siegler, 1967, p. 578). Psychoanalysts explain the behavior of the alcoholic in terms of three unconscious tendencies:



self-destructive urges, oral fixation, and latent homosexuality. Treatment according to this viewpoint requires long term psychotherapy which explores "the deepest and oldest strata of the mind" (Siegler, 1967, p. 578).

f) Family interaction model. According to this view, alcoholism can be best conceptualized by looking at the family interaction. Some perceive the interaction as a game where people, possibly due to their background, play distinct roles, e.g. alcoholic, martyred wife, neglected children, disgraced parents, etc. Although the family recognizes the need for the alcoholic to seek help they also exert pressure to maintain things the way they are. Proponents of this model note "as these family games are circular and self-reinforcing, it is useless to inquire how it all began" (Siegler, 1967, p. 579).

Since the problem involves the whole family, treatment must involve the family. Individualized approaches will not be effective.

g) Another two unidimensional models include the "old" and the "new" medical models. The former appears similar to the "dry" moral model by considering "alcoholism to be a serious and eventually fatal disease, which is incurred by the 'immoral behavior' (i.e. excessive drinking)





of the patient himself" (Siegler, 1967, p. 580). The reason for the drinking is unknown except to say that alcoholics seem unable to control themselves.

The "new medical model" seems to be much more progressive than its forerunner. Pattison (1976) indicates "there has been a shift from viewing alcoholism as sinful behavior to viewing alcoholism as sick behavior" (p. 592). The impetus for this trend appeared to come with the publication of E. M. Jellinek's book, The Disease Concept of Alcoholism. Etiology according to this model may be attributed to both hereditary and to biochemistry. Siegler (1967) writes that alcoholism is a "progressive, often fatal disease, possibly hereditary. Alcoholics are ill people whose body chemistry is such that they can become addicted to alcohol" (p. 581).

Siegler (1967) compares the above two models in the following way.

a) the new one is concerned with a possible medical etiology, while the old one is concerned with what might be called the "moral etiology" of the disease.

b) [the new model] is a hopeful one, and one which encourages new scientific research. It enables those using it to draw strength from the successful campaigns against other major illnesses. The old medical model reflects the physician's dilemma when confronted with a disease that has moral overtones. It is an incomplete medical model which works only when





the patient is improving; if the patient returns to drinking and gets sicker, this is seen as the cue to abandon medicine for morality of simple and exhortative kind. (p. 584)

h) Jellinek's Phases Model. The unidimensional model that has probably had the greatest impact when it comes to understanding alcoholism is the phases model of the late E. M. Jellinek. G. I. Albrecht (1973) considers this to be the most important unidimensional model. This success is illustrated in the fact that the phases model has been the standard textbook description of the alcoholism process (Albrecht, 1973). Essentially, Jellinek posited four phases of alcoholism. The first of these is the Pre-alcoholic phase which is considered to have two components:

1. The individual begins to confront the tensions of everyday life by drinking. At this point one of his family, friends, or co-workers regards the individual as a problem drinker. He uses alcohol as a drug to treat his anxieties and to help him relax, but drinking is no longer confined to social situations.
2. As the individual begins to build up tolerance for alcohol, he begins to drink larger quantities and with more frequency, to achieve the same effects that he used to have with less alcohol. (p. 20)

The next phase is the early alcoholic phase which is characterized by blackouts, sneaking drinks, preoccupation with alcohol, defensiveness and accompanying guilt feelings,



and denial of having a problem.

Phase III is considered to be the crucial phase because this is the "point at which the alcoholic becomes addicted."

Finally the chronic phase occurs and we begin to see many of the severe physical problems which result from heavy drinking. The whole process from beginning to end can be summed up quite well in a linear graph which was produced by Glatt (1972). (See page 23.)

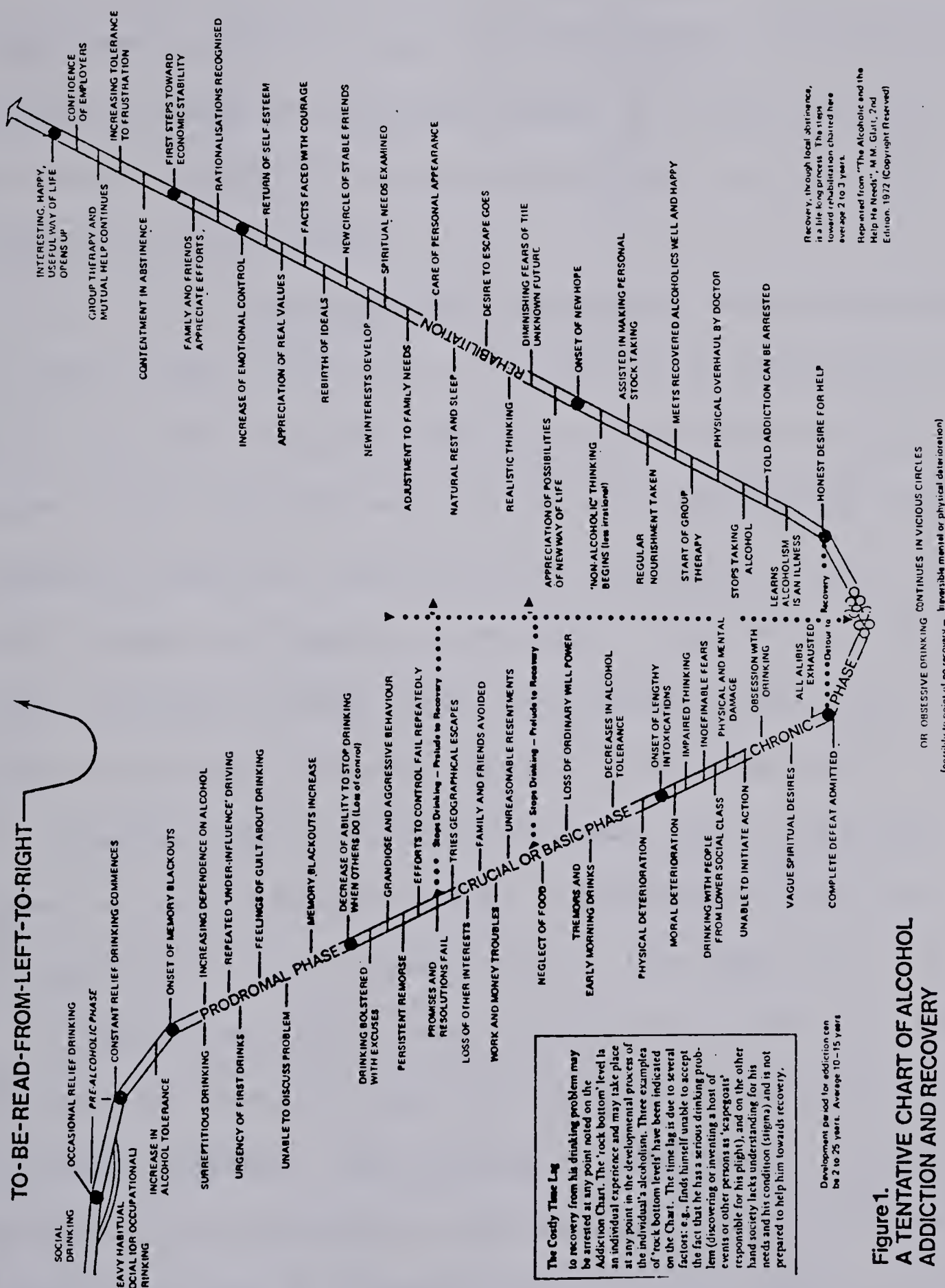
For teaching, the value of this graph is that it points out the progression of alcoholism and as well, presents the recovery process. The present discussion implies that all alcoholics follow the same process (with minor variations) from beginning to end. This factor has caused some to question the accuracy of the model (Albrecht, 1973).

The unidimensional models discussed above by no means review all such models. Instead they represent some of the most common. Finally an important criticism of these models has been offered by Albrecht (1973):

The ultimate test of a model or theory is the accuracy with which it predicts and explains behavior. There is no doubt that the unidimensional models that were discussed are useful but unfortunately they do not allow for the diverse and terribly complex behavior that is observed among problem drinkers and in the problem drinking process. (p. 23)











2. Let us now turn to a consideration of the multi-dimensional models. As was stated originally this type of approach assumes the different types of alcoholism exist and that the paths to eventual alcoholism can vary from individual to individual.

a) Five types of alcoholism: One multidimensional model is the five types of alcoholism as presented by E. M. Jellinek. Shortly after his introduction of the phases model Jellinek began to see the inadequacies of this approach, therefore introduced the concepts of alpha, beta, delta, gamma, and epsilon alcoholism. This was a step in right direction in that there was consideration given to the possibility that different types of alcoholism exist.

Another model presented by Kissin (1977) and based upon the work of Seevers (1968) and Jellinek (1960) is illustrated in the following chart. (See page 25.)

Rather than citing only one cause for alcoholism this theoretical viewpoint considers biological, psychological, and social factors. In addition to considering predisposing factors it also considers precipitating or triggering factors in the form of a psychological crisis (anxiety, depression, and insomnia) and a social crisis (loss of family, loss of job, social isolation).



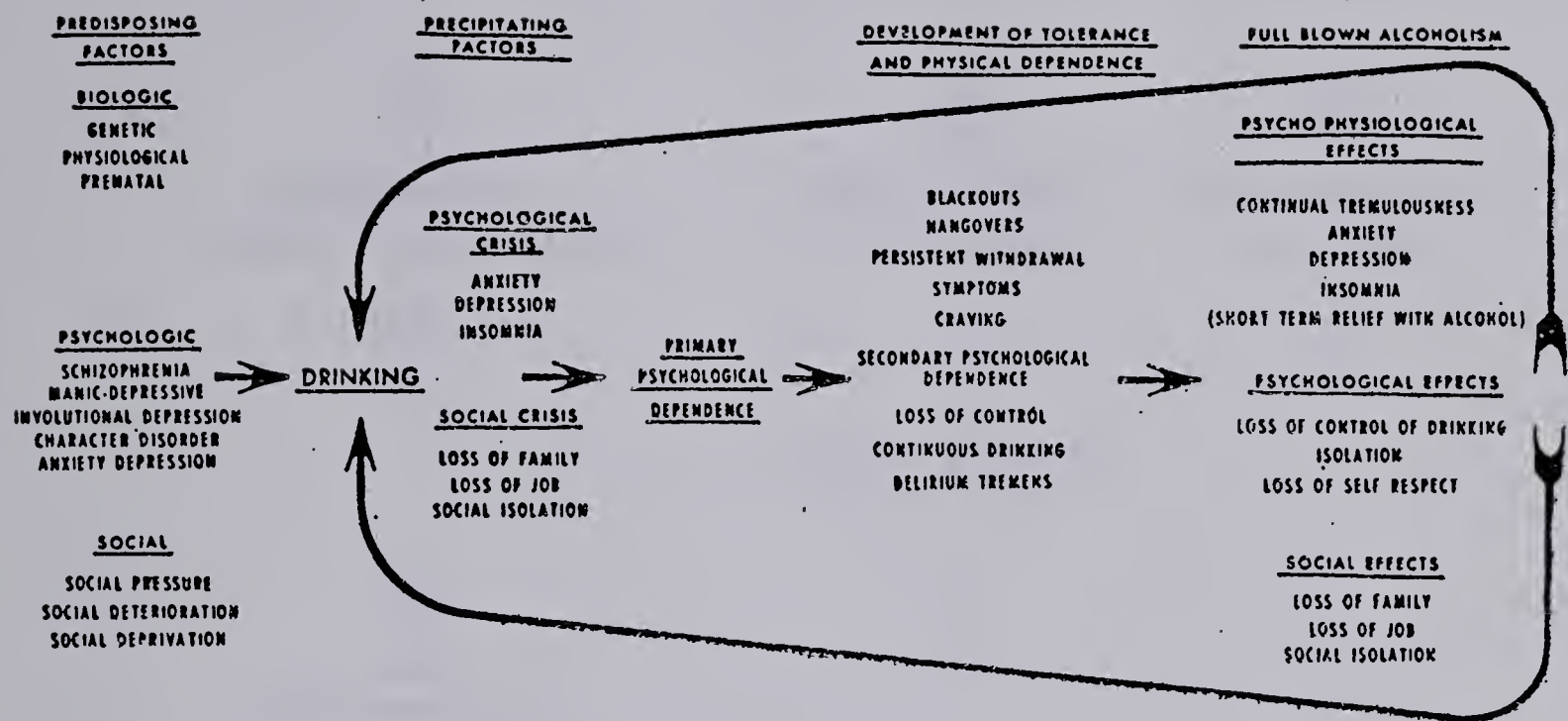


Figure 2. Alcoholism as symptom and disease.

b) Pattison Models. The last multidimensional model to be considered stems from the work of Pattison (1976) and is summarized in Table 1.

The treatment process can be examined along three dimensions firstly, the population or populations to be treated (P), the treatment facility or facilities (F), and the treatment outcome or outcomes (O). All three dimensions have been depicted in the table. Model I represents the unidimensional model. Here we have a homogeneous population, a homogeneous treatment, and a homogeneous outcome. Patti-son suggests we give thought to the possibility of each dimension as being heterogeneous. With this in mind we



TABLE 1  
POSTULATED MODELS OF RELATIONSHIP BETWEEN VARIABLES OF  
ALCOHOLISM TREATMENT EVALUATION. PATTISON (1973)

I	( ) (P) ( )	( ) (F) ( )	( ) (0) ( )
	Homogeneous Patient population	Homogeneous facility	Homogeneous outcome
II	( ) (P) ( )	F1 F2 F3	( ) (0) ( )
		Heterogeneous facilities	
III	P1 P2 P3	( ) (F) ( )	( ) (0) ( )
	Heterogeneous Patient population		
IV	P1 P2 P3	F1 F2 F3	( ) (0) ( )
	Heterogeneous Patient population	Heterogeneous facilities	
V	( ) (P) ( )	( ) (F) ( )	01 02 03
			Heterogeneous outcome
VI	P1 P2 P3	( ) (F) ( )	01 02 03
		Homogeneous facilities	
VII	( ) (P) ( )	F1 F2 F3	01 02 03
	Homogeneous Population		
VII	P1 P2 P3	F1 F2 F3	01 02 03
		All heterogeneous	





arrive at the other seven models. Pattison (1976) rejects models I through VII for the following reasons:

Model I, II, III, IV all share the premise that the category of outcome does not vary, and hence these may be discarded.

Model V is illogical in that no variability can exist in outcome when no variability exists in either the patient population or the treatment facility.

Model VI suggests that the variability in outcome is due only to the variability of the patient population which goes through nonvariant treatment facilities. But since facilities do vary, this model must be discarded.

Model VII suggests that the variability in outcome is due only to the differences in the treatment/facilities and their methods. However, the research available provides evidence that there is a correlation between outcome variability and population variability. Hence this model is contradicted by the data. (p. 178)

The last model is the one the writer would like to consider particularly because, if correct, it suggests the possibility of "matching a certain type of patient with a certain type of treatment and facility to yield the most effective results" (Pattison, 1976, p. 179). It also suggests that "outcome success rates could be maximized if the expectations of the patient and facility could be matched" (Pattison, 1976, p. 179). Lastly, treatment programs can





maximize effectiveness by clearly specifying what population they propose to serve, what goals are feasible with what population, and what methods can be expected to best achieve those goals (Pattison, 1976, p. 179).

It is the contention of the writer that model I has resulted in fewer treatment successes than might have been the case if one were to select treatments based upon the needs and personal characteristics of each alcoholic who is referred for help. Pattison points to a study by "Chafez and his co-workers (1962) who have demonstrated, that the failure of treatment programs is not the alcoholics' lack of motivation. Rather it is the failure to provide an appropriate program to which the alcoholic can respond" (p. 178).

Today there are many types of rehabilitation programs available, many of which incorporate a variety of therapies. Alcoholics Anonymous for example, since its inception in 1935 has purported to have helped many people. Others, who may have difficulty with this type of approach may gravitate towards more comprehensive types of treatment programs such as is offered by the Alberta Alcoholism and Drug Abuse Commission. Under the umbrella of AADAC and its funded agencies there is a multiplicity of treatment programs



available. Within these programs one can find a wide range of therapies: individual counseling, group psychotherapy, chemotherapy (Antabuse), recreational programs, groups for spouses, lecture presentations, psychological assessment, as well as inpatient and outpatient treatment programs. In addition other therapies such as behavior modification and covert desensitization either are available or have been available at one time. In spite of the wealth of potential resources an adequate method is yet to be found to reliably match patients to treatment (Pattison, 1978 correspondence).

### Locus of Control

#### 1. Locus of control defined.

In 1966, Julian B. Rotter introduced the locus of control concept into the psychological literature. According to Rotter (1966):

When a reinforcement is perceived by the subjects as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labelled this a belief in external control. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in



internal control. (p. 1)

Since its introduction, the concept has been employed in numerous studies.

2. Locus of control and alcoholism.

"Whether people, or other species for that matter, believe that they are actors and can determine their own fates within limits will be seen to be of critical importance to the way in which they cope with stress and engage in challenges" (Lefcourt, 1976, p. 2). This statement implies that an individual with an internal locus of control will cope with life situations better than one with an external locus of control, and would display a socially positive personality. The reasons for this are that he has a greater reliability in his judgment (Phases, 1976) is less subject to changes in environmental context when making a decision, and is more able to identify single judgments that need to be made. Rotter would appear to agree with this viewpoint when he writes:

Our society has so many critical problems that it desperately needs as many active, participating internal-minded members as possible. If feelings of external control, alienation and powerlessness continue to grow, we may be heading for a society of dropouts - each person sitting back watching the world go by. (Rotter, 1971, p. 59)





If one follows this line of reasoning, then it would appear that alcoholics as a group, would be more external than internal.

After reviewing a number of studies which determined the locus of control orientation of civil rights activists, T.B. patients, delinquents, retardates, schizophrenics, middle-class vs. lower-class individuals, Goss and Morosko (1970) concluded:

These studies seem to indicate that individuals who believe that they control their own reinforcements will exercise more control in directing their own lives than their externally oriented peers. Individuals with an internal control orientation are likely to learn and behave in ways which continue to facilitate personal control, thus leading to more adaptive behavior, while individuals with external control expectancies are more likely to engage in dysfunctional behavior. (p. 190)

Goss and Morosko (1970) after a review of the above findings made several hypotheses about alcoholics.

1. Because this population has for a time maintained a rather marginal social existence and because of their seeming passivity and dependency, scores significantly higher (external) than average were expected.
2. [Using the MMPI and the I-E and] in line with the general hypothesis of lack of control being related to dysfunctional behavior, and the previous findings of external control being related to anxiety measures, positive



relations between PT, D, F and I-E scores were expected as well as negative relation between K and I-E (low scores indicate internal control, high scores indicate external control). (p. 190)

Goss and Morosko then studied 200 male and 62 female alcoholics in order to test the above hypotheses. Contrary to hypothesis number one they found that the scores for the alcoholics were significantly lower which indicated a more internal locus of control. Hypothesis number 2 on the other hand was supported by the results and suggested that "male alcoholics who score in the more external direction also exhibit more anxiety, helplessness, alienation, and generally more clinical pathology. Those alcoholics who score on the internal direction appear to maintain substantial ego-strength or perhaps functional defensiveness as reported by the MMPI" (p. 192).

Distefano, Pryer, and Garrison (1971) studied 50 male alcoholics and 50 male emotionally disturbed hospital patients. Alcoholics when compared with the emotionally disturbed group "scored significantly lower (more internal) at the .01 level of confidence ( $T=4.81$ ,  $df=98$ ). In the alcoholic group, the mean and SD were 5.7 and 3.6 respectively. In the emotionally disturbed group, the mean and SD were 9.5 and 4.2 respectively" (p. 36). No significant



differences were reported between the Goss and Morosko sample and this sample. Compared with Rotter's normative sample this group was more internal.

Gozali and Sloan (1971) compared a group of 55 male alcoholics with 98 male non-alcoholics on Rotter's I-E scale. They also examined test data on an additional 101 alcoholics to determine if a correlation existed between the I-E scale and other psychological constructs. The results supported the hypothesis that alcoholics would be (a) more internal than non-alcoholics, and that (b) there would be little correlation between the I-E construct and other personality dimensions. In their conclusion Gozali and Sloan noted that "internal orientation may contribute to a person's proclivity to become an addict, and that alcoholism treatment programs should consider modification of alcoholics' control orientation as a part of their treatment objectives" (p. 161).

Oziel, Obitz, and Keyson (1972) studied 37 male and 13 female alcoholics using Rotter's I-E scale and a scale designed to measure perceived locus of drinking control. The findings clearly supported the hypothesis that alcoholics as a group "perceive themselves as being in control of their behavior in general and of their drinking behavior in





particular" (p. 958).

Goss and Nerviano (1972) after reviewing the above studies tried to verify the findings by using a large in-patient sample of male alcoholics. There were 266 patients in the group and "virtually all were lower socio-economic whites with an average of 11 yr. of education and predominantly semi-skilled occupational backgrounds" (p. 406). According to the results the mean I-E score for the 266 alcoholics was 7.5 ( $SD=3.72$ ). The authors indicated that a low score on the Rotter I-E scale is an indication of internality.

Butts and Chotlos (1973) compared a group of 74 male alcoholics and 68 male non-alcoholics on perceived locus of control using the Rotter I-E scale. Contrary to the findings of the previous studies these writers found that alcoholics were more external than non-alcoholics when they were compared with a group of the same socio-economic status. The writers stress the need to use a similar comparison group whenever comparing alcoholics with non-alcoholics.

Nowicki and Hopper (1974) studied 15 male inpatients and 12 female inpatients and 15 male and 12 female outpatients. All were registered in an alcoholism treatment program. The subjects were asked to complete a group of





tests consisting of a biographical inventory, the Nowicki-Strickland locus of control scale for children, a figure copying task, and a modified form of the Wechsler Adult Intelligence Scale consisting of the comprehension, similarity, and general information subtests.

The results of the study supported the prediction that "externality was related to dysfunctional behavior. It was found that female inpatient alcoholics had more external scores than others and that generally externality was associated with a greater degree of dysfunctional behavior" (p. 1). Perhaps the most important part of the Nowicki Hopper study was its critique of the Goss and Morosko (1970) research. Four criticisms were offered.

1. Goss and Morosko did not deal adequately with inconclusive findings regarding female alcoholics. (p. 2)
2. Little information was given regarding important subject characteristics (e.g., first or repeat admission, time in treatment, when testing took place in relation to treatment, etc.). (p. 2)
3. The author never stated with whom the locus of control scores of alcoholic subjects were being compared. It can only be assumed that the comparative group used was Rotter's normative sample. (p. 2).
4. Treatment modalities were not varied. Outpatients like those used by Goss and Morosko, were those patients who had shown enough



control over their lives to deal with their alcoholism and yet not need residential treatment. (p. 2)

O'Leary, Donovan, and Hague (1974) studied 100 male alcoholic veterans using the MMPI and Rotter's I-E scale. The findings were in the internal direction and supported Goss and Morosko who found "significant correlations between I-E and the F, K, D, Pt, and Si scales in both of their independent alcoholic samples" (p. 312). Contrary to the Gozali and Sloan study the results of this study indicated that perceived locus of control and personality characteristics are related (however this finding was expressed with caution).

Oziel and Obitz (1975) studied three groups of alcoholics according to the total time spent in treatment.

1. 25 alcoholics (18 men and 7 women who were currently in a detoxification program for the first time and had not received prior treatment. (p. 159)
2. 25 alcoholics (17 men and 8 women) who were in a detoxification program 3 or more times but had not taken part in systematic rehabilitation programs. (p. 159)
3. 50 alcoholics (37 men and 13 women) who were participating in an ongoing post detoxification rehabilitative program of 2 months or greater duration. (p. 159)

The results supported the hypothesis that "as alcoholics



experienced greater exposure to treatment programs they would report perceiving themselves in greater control of their behavior in general and of their drinking behavior in particular" (p. 158). Oziel and Obitz indicate that they do not see their study as challenging the findings of other researchers who indicate that alcoholics tend to be more internal. Instead:

What is suggested is that this perceived internal control on the part of alcoholics may be a consequence of exposure to treatment modalities that stress the importance of self-motivating, self-control, and a "you-can-do-it-if-you-want-to" attitude, rather than a consequence of a predisposing personality dimension. (p. 161)

O'Leary, Donovan, Hague, and Shea (1975) tested 40 male veteran alcoholic inpatients using Rotter's I-E scale. In addition to the I-E score, two subscale scores based upon the research of Mirels (1970) were employed. These consisted of a Personal Control Scale (PC) and a Socio-Political Control Scale (SC). Scores from the two scales were further identified as Factor I scores (PC) and Factor II scores (SC). The results supported the hypothesis "that among male alcoholics overall locus of control and Factor I scores will shift toward internality over a 6-week period of treatment; however, no shift was anticipated in factor II scores"







(p. 359). Client's initial scores on the I-E scale, which was completed 1½ weeks prior to admission to the program, showed them to be more internal.

Some of the above studies have been summarized in Table 2. This table was presented by Rohsenow and O'Leary (1978).

### Discussion

After review of the studies included in Table 2 below, Rohsenow and O'Leary (1978) pointed to two major sources of confusion. Firstly, "a mean I-E score which is designated as internal in some of the studies is designated as external in others" (p. 61). This makes it very difficult to answer the question: Are alcoholics as a group more internal or external? Obitz (1978) has responded to this criticism by providing normative locus of control data for male alcoholics. This was done by reviewing ten studies which involved a total of 835 subjects. According to his findings "the more internally controlled alcoholic should be defined by a locus of control score of 6 or below, the more externally controlled alcoholic by a score of 7 or above" (p. 379). The second problem has to do with the definition of the term "alcoholics." "First, the 'alcoholic' populations sampled seem to vary widely in their characteristics, severity of drinking



TABLE 2

I-E SCORES FOR ALCOHOLICS AND CONTROLS WITH CONTROL SAMPLE DESCRIBED<sup>a</sup>  
 ROHSENOW & O'LEARY (1978)

<u>Study</u>	<u>N<sup>b</sup></u>	<u>Mean I-E Score</u>		<u>Control Sample</u>
		<u>Alcoholic</u>	<u>Control</u>	
Goss & Morosko (1972)	100	6.52	8.15	Rotter's male norms, college
	100	6.11	8.15	Rotter's male norms, college
	62	6.74	8.42	Rotter's female norms, college
Distefano et al (1972)	50	5.7	8.15	Rotter's male norms, college
	50/50	5.7	9.5	Emotionally disturbed inpatients
Gross & Nerviano (1972)	266/200	7.35	7.35	Opiate addict inpatients
Gozali & Sloan (1971)	55/98	6.4	8.8	Church organization members
Costello & Manders (1974)	14/14 21	4.7 7.09	6.6 -	Ex-alcoholic counselors (None)
Chess et al (1971)	13/13	8.28	6.01	Hospital employees
Butts & Chotlos (1973)	74/68	8.23	6.01	Matched steelworkers & outpatients
Donovan & O'Leary (1975)	23/23	6.39	7.52	Matched patients and staff
Totals	828/1,667	6.43	7.97	

<sup>a</sup> Scored in external direction, maximum = 23.

<sup>b</sup> Single figure refers to alcoholics; a figure after a slash refers to controls.



problem, and diagnostic criteria from study to study. Second, good evidence exists that 'alcoholics' are not homogeneous as a group. A multi-dimensional model of alcoholism better accounts for research data (Horn and Wanberg, 1970, Wanberg and Knapp, 1970)" (Rohsenow & O'Leary, 1978, p. 62).

Hinrichsen (1976) appears to summarize some of the problems with the research in the following statement.

Sampling problems, the selection of appropriate comparison groups, and the identification and control of variables other than the diagnosis of alcoholism have been relatively neglected by workers in this area. Demographic variables are important: reviews of the locus of control literature (17, 18) have identified variables such as age, intelligence, social class, ethnicity and social desirability which affect locus of control scores. Socially desirable responding for example, has been shown to be significantly related to internal locus of control scores among alcoholics (6). This finding raises the question whether alcoholics with low I-E scores are "genuinely" internals or, as Rotter (30) has pointed out, whether alcoholics, who have been told ad nauseam by significant others that they are responsible for their own behavior, do the socially expected thing by responding to the internally keyed items on the I-E scale. Clearly, the absence of experimental or statistical controls of potentially confounding variables severely limits the utility of much of the previous work in this area. (p. 912)

### 3. Locus of Control and other personality measures.

In a review of the literature relating the locus





of control concept to age, ability to function and personality traits Rohsenow and O'Leary (II, 1978) note:

Research with this construct has found that those with external locus of control are generally more anxious, aggressive, dogmatic, depressed, suspicious, and afraid of failure. Internals, on the other hand, are more likely to control their impulses, attempt environmental and self-control, resist manipulation and subtle pressure, exhibit socially desirable behavior, and appear well adjusted (Joe, 1971). (p. 215)

In a study cited previously Goss and Morosko (1970) found that alcoholics who score in the internal direction "Maintain substantial ego strength while alcoholics scoring in the external direction exhibit more anxiety, helplessness, alienation, and generally more clinical pathology" (p. 192).

Lefcourt (1972) in a review of the locus of control construct compared the internal and external in terms of: resistance to influence; cognitive activity; deferred gratification; achievement behavior; and response to success and failure. The findings appear to indicate that internals are: less susceptible to external pressure; are more cognitively active; appear able to delay gratification; and "do seem to be more measured in their responses to success and failure than externals insofar as expectancy statements made during





skill determined level of aspiration tasks are concerned" (p. 21).

O'Leary (1974) administered Rotter's I-E scale along with the MMPI to 100 male alcoholic veterans. "Significant positive correlations were found between total I-E score and the F, D, Pt, and Si scales; I-E was found to correlate negatively with the L and K scales" (p. 314). The findings of the above study appear to be in line with the previous study by Goss and Morosko. According to O'Leary:

Alcoholics defined by the total I-E score as external, which indicates a perceived lack of control over life events, appear to be dissatisfied, and tend to magnify the ills of the world. Internal alcoholics conversely, appear to be relatively calm, dependable, self-confident, socially outgoing, and interpersonally warm, they also appear to have a relatively high level of ego strength and an ability to deal effectively with personal problems. (p. 314)

Scott and Severance (1975) administered Rotter's (I-E) locus of control scale, the MMPI, and the CPI to a sample of 100 males who were heterogeneous in age and education level. The correlations of the I-E and the two other scales have been reproduced below. (See Table 3)

An asterisk has been placed after a number of the correlations. These represent significant correlations ( $p < .01$ ). Eight of the MMPI scales showed significant correlations as



TABLE 3

CORRELATIONS OF I-E WITH CPI AND MMPI ( $N=100$ )

DONALD P. SCOTT AND LAURENCE J. SEVERANCE

<u>CPI Scale</u>	<u>r</u>	<u>MMPI Scale</u>	<u>r</u>
Dominance (D0)	-.34*	K	-.46*
Capacity for Status (Cs)	-.35*	F	+.30*
Sociability (Sy)	-.29*	Hypochondriasis (Hs)	+.49*
Social Presence (Sp)	-.17	Depression (D)	+.36*
Self-Acceptance (Sa)	-.22	Hysteria (Hy)	+.08
Well-Being (Wb)	-.42*	Psychopathic Deviate (Pd)	+.22
Responsibility	-.39*	Masculinity-Femininity (Mf)	-.01
Socialization (So)	-.16	Paranoia (Pa)	.00
Self-Control (Sc)	-.34*	Psychasthenia (Pt)	+.35*
Tolerance (To)	-.45*	Schizophrenia (Sc)	+.41*
Good Impression (Gi)	-.37*	Hypomania (Ma)	.06
Communality (Cm)	-.06	Social Introvert (Si)	+.37*
Achievement via Con- formance (Ac)	-.38*	L	-.24
Achievement via Inde- pendence (Ai)	-.23	Taylor's Manifest An- xiety (MAs)	+.44*
Intellectual Efficiency (Ie)	-.39*		
Psychological Minded- ness (Py)	-.16		
Flexibility (Fx)	-.02		
Femininity (Fe)	-.01		

\* $p < .01$ , two tailed test.



well as 10 of the CPI scales. (See Table 3.)

The results of the above study characterized internals as being "high in ego strength, responsible, outgoing, persistent, prone to minimize worries, intellectually able, forceful and verbally fluent, while externals appeared suspicious of others' motivations, dissatisfied, low in ego strength, concerned with bodily malfunctions, inhibited, insecure, easily disorganized, and defensive" (p. 143).

An earlier study agrees with the above findings on seven of the dimensions. Hersch and Scheibe (1976) correlated the scores of college males and females on the I-E scale and on the California Psychological Inventory. They found the "internal scorer is higher on the Dominance, Tolerance, Good Impression, Sociability, Intellectual Efficiency, Achievement via Conformance, and Well-being scales" (p. 612).

Up to this point, the person with an internal orientation has been cast in a very positive light, whereas, the external appears to have more negative characteristics. Janzen and Beeken (1973) question what they consider to be one of the underlying assumptions of the Locus of Control research.

It is unfortunately common in research concerning locus of control, that implicit assumptions of the negative nature of internality contribute a great deal to





generation of the hypotheses and explanation of results. One of the most seriously damaging of these implicit assumptions concerns a predilection to activity of the "internal" as opposed to passive apathetic tendencies of the "external". Very little research supports this conjecture. (p. 297)

Eby, Janzen, and Boersma (1976) indicate that not all the research has pointed to the "positive nature of internality." They point to the following studies in support of this.

Battle and Rotter (1963) found that among lower class black children, the more intelligent tended to be more external. Durbette and Wolh (1972) repeated Battle and Rotter's study and reported similar results. Efram (1964) found that among high school students the tendency to repress failures was significantly related to internality. In another study, Janzen, Beeken, and Hritzuk (1973) reported that internal teachers were less likely to endorse student autonomy than external teachers. (p. 238)

#### 4. The I-E Concept and it's implications for treatment

One of the statements often heard around alcoholism treatment programs is that, "You only get out of the program what you put into it!" This statement appears to reflect the internal belief that rewards and reinforcements come about because of one's own actions. For the Internal person acceptance of this piece of philosophy could come about



readily. For the External person, on the other hand, who believes that "fate, luck, or chance" controls his life, acceptance (of the above statement) may not come about as readily. "Studies surveying the length of stay of alcoholics participating in outpatient treatment programs have pinpointed a basic problem: many alcoholic patients do not maintain active participation in outpatient treatment programs as long as their therapists think they should" (Obitz, 1975, p. 187). Very often the individual who does not accept the programs underlying philosophy is considered to be unmotivated, lazy, negative, and often drops out or is terminated prior to the completion of the program. Goss and Morosko (1970) point out that "passivity and irresponsibility are often the products of restricted fields of alternatives where little chance for personal control is perceived" (p. 189). If the client believes that his past actions have had little impact upon the events around him then how can he possibly begin benefitting from a program that emphasizes personal growth.

Some may argue that the reason for treatment failure is lack of "motivation." MacDonald (1971) indicates that it is possible to have an individual who is motivated but who does not try to effect change because he has a negative



expectancy for success. Prior to this, however, they must distinguish between those individuals who believe they have control and those who do not believe they have control.

After the locus of control of a particular patient has been determined then treatment personnel may chose among treatment alternatives. Firstly, if, as the research seems to indicate, the internal has more coping skills than the external then one must try to make external clients more internal. "DeCharms and Reimans have shown that behavioral as well as indirect verbal indicators of locus of control can be altered by training programs directed at increasing an individual's sense of personal causation" (Lefcourt, 1976, p. 121). If an individual fails to see the relationship between his behavior and its consequences, then this could adversely affect any learning that may occur. According to Rotter (1966):

The effect of reward or reinforcement on preceding behavior depend in part on whether the person perceives the reward as contingent on his own behavior or independent of it.  
Acquisition and performance differ in situations perceived as determined by skill versus chance. (p. 260)

Another alternative which should be considered stems from the work of Golden (Moursund, 1976). Golden's work





suggested that internals and externals differ in their need for structure.

Some evidence suggests that, in certain situations, differential treatment of Internals and externals is appropriate. External children respond well to structure and seem to be able to function better in a structured environment, Internals tend to be handicapped by too much structure.  
(p. 342)

While the above study was carried out with children it may have important implications in psychotherapy and to treatment in general.

Many treatment programs are predicated upon the idea that the "patient should discover answers for himself." Other programs offer a more directive approach. Therapies can also be divided into non-directive (Rogers) and directive (Ellis). It could be hypothesized that alcoholics who have an internal locus of control would prefer non-directive types of therapy (less structured) while alcoholics having an external locus of control would prefer more directive forms of therapy.

In conclusion, all of the studies relating to locus of control appear to take the view that the alcoholic population is homogeneous. All alcoholics are considered to be internal or all alcoholics are considered to be external.



None of the writers have provided a breakdown as to the number who were internal versus the number who were external. Not only are alcoholics lumped together under one descriptive heading but this is often followed by a singular, global approach to treatment. A movement away from this approach is necessary since such a stand can only distract from overall treatment effectiveness.

## 5. Questions

The present study will try to answer some of the following questions.

1. Are alcoholics who first enter treatment more internal or more external as determined by Rotter's I-E scale and are they high or low in dominance, sociability, sense of well-being as indicated by their scores on the California Psychological Inventory?

2. What happens to the alcoholic after treatment? Does he/she score higher or lower in dominance, sociability, sense of well-being and or become more internal or external?

3. Do individuals who have been identified before and after treatment, as internals/externals according to the Rotter I-E scale show different preferences for therapists (non-directive vs directive)?



4. Do individuals identified, before and after treatment, as high or low in dominance, sociability, sense of well-being show different preferences for therapists (directive vs non-directive)?

#### Hypotheses

1. There will be no significant differences in the mean I-E scores between the experimental and control groups on the pre-test measures.

2. There will be no significant differences in the mean I-E scores between the experimental and control groups on the post-test measures.

3. Mean I-E scores of alcoholics participating in experimental and control groups will not be less than 6.

4. There will be no significant difference in mean I-E scores within the experimental and control groups.

5. There will be no significant correlation between alcoholics' scores on the Rotter I-E and their scores on the dominance, sociability, and sense of well-being scales of the CPI.

6. There will be no significant correlation between alcoholics' scores on the Rotter I-E scale and their choice of a directive vs non-directive therapist.

7. There will be no significant differences between





male and female mean pre-test and post-test scores on the Rotter I-E, the dominance, sociability, and sense of well-being scale of the CPI.

8. There will be no significant differences in the mean pre-test and post-test scores between males and females in their choice of a directive and non-directive therapist.



## CHAPTER III

### EXPERIMENTAL DESIGN AND PROCEDURE

#### Description of Henwood Population (Based upon 1976 figures)

Patients who are admitted to the Henwood treatment program come voluntarily. They are referred from a number of sources with the largest number of referrals coming from other AADAC departments, doctors, and social workers. While the majority of patients who were admitted to Henwood in 1976 (57.67%) reside in Edmonton, a sizeable number (37.52%) came from other Alberta points. In addition 31 patients (4.81%) were referred from out of the province.

According to an unpublished statistical report which was prepared by the Henwood treatment supervisor in 1976,

The majority of clients at Henwood in 1976 were employed, married, protestant males (78.76%). Of that majority the largest group was from 30-40 years, had a high school education with further training, mainly in skilled trades and an income in the 6-10 thousand dollar bracket. 88.84% of the total 1976 population had alcohol related problems, with 1-3 year length of addiction group being the largest. (see Appendix A)

Although the majority of patients are referred for alcohol related problems many of these people have a dual dependency which may not have been indicated on admission. Approximately 8% of the patients admitted in 1976 were



diagnosed as having an alcohol and drug problem. An additional 4% were admitted for problems related to drugs only (other than alcohol).

There appeared to be a general trend in 1976 towards an increase in the younger age group from 14-40 and a decrease in the age group 41-75. This may reflect an earlier recognition by the public of the symptoms of alcoholism as well as a greater awareness of available treatment services.

#### The Research Sample

Three groups of patients were selected for study. Initially the intent was to study two groups, an experimental group and a control group; however, due to time changes to the Henwood program from 28 days to 21 days this was not possible.

Recruitment. Prior to involving Henwood patients in the study staff directly involved were contacted and presented with a brief verbal description of the study. All felt that the study was worthwhile and gave permission to proceed.

Shortly after their arrival at Henwood subjects for experimental groups 1 and 2 were contacted. Each group was approached at an orientation meeting. The writer gave an explanation and invited them to be subjects in the study.





Those volunteering represented the present sample.

The procedure for recruiting subjects for the control group had to be modified in order to enlist an adequate number of people. Initially, it was hoped that subjects for this group could be drawn from patients who were on the Henwood waiting list. Due to the small number on the waiting list this procedure had to be abandoned. Next counselors at AADAC's two outpatient clinics were contacted and the study explained. While this procedure did generate a few clients their recruitment was extremely slow. The third and final alternative was to contact patients directly which was accomplished by contacting clients at a series of lectures conducted by AADAC. This procedure allowed for the addition of approximately four subjects per week. Because of these procedures the Henwood patients were tested in a group setting whereas the control subjects were tested 1, 2, or 3 at a time over a two month period. The average time between the pre and post-tests for the three groups of subjects was as follows: experimental group 1, 22 days; experimental group 2, 15 days; and the control group, 21 days.

#### Procedure in Administration

The details of the study are described in Figure 3. For both the control and experimental group the pre-test



<u>Pre-Treatment</u>			<u>Post-Treatment</u>	
Complete	Choose		Complete	Choose
EXPERIMENTAL	Rotter's Internal External Scale	Henwood Treatment Program	Rotter's Internal External Scale	Dr. Rogers Interview or Dr. Ellis Interview
	California Psychological Inventory		California Psychological Inventory	
CONTROL	Complete	NO Henwood Treatment	Complete	Choose
	Rotter's Internal External Scale		Rotter's Internal External Scale	Dr. Rogers Interview or Dr. Ellis Interview
	California Psychological Inventory		California Psychological Inventory	

FIGURE 3  
Study Design



and post-test consisted of:

1. Administration of Rotter's internal/external locus of control scale. This scale takes between 10 and 12 minutes to administer.

2. Administration of the California Psychological Inventory. This scale takes between 45 and 60 minutes to complete.

3. Two films were shown illustrating the counseling approaches of Dr. Carl Rogers and Dr. Albert Ellis. Both films are part of a film series entitled "Three Approaches to Psychotherapy." Each of the experimental and control groups was divided in half. Half of the group saw the films in the sequence Rogers/Ellis and half saw the sequence Ellis/Rogers. This procedure was followed with the experimental and with the control groups.

In order to shorten the films which are 48 minutes for Dr. Rogers and 38 minutes for Dr. Ellis, two excerpts were placed on video tape. These segments only included the interviews with the client Gloria. The video tape was 50 minutes in length. It should be noted that the complete video tape was used for the pre-test only. For the post-test, clients saw the first and last five minute segments of the Roger's interview and the first and last five minutes of





the Ellis interview.

4. Before the video tape was shown the clients were given the following verbal instructions:

You are going to see two different therapists interviewing the same client Gloria. After you have seen the two interviews you will be asked to decide which therapist you would choose to help you with your problems. Please do not discuss your choice with the others. Should neither therapist appeal to you try to choose the one you prefer the most. The names of the therapists are:

Dr. Carl Rogers

Dr. Albert Ellis

5. After viewing the two interviews the following question was distributed.

If you had to choose between the two therapists you have just seen, to solve your own problems, which one would you choose? Please circle your answer.

Dr. Rogers

Dr. Ellis

6. Order of Presentation

The questionnaires and the video tape were



presented in the following order:

- a) Completion of Rotter's I-E scale.
- b) View the video tape of Dr. Rogers and Dr.

Ellis and choose the preferred interview.

- c) Complete California Psychological Inventory.

Due to the length of this questionnaire patients were allowed to complete it on their own time.

### Instruments

#### Rotter Internal-External Locus of Control Scale

The scale consists of 29 items. Twenty three of the items measure the locus of control construct and 6 items are filler items (used to disguise the purpose of the test). The questions are arranged in pairs in a forced choice format. The score that is received represents the total number of external items that are chosen. Scores range from 0 to 23 with 0 representing the more internal expectancy and 23 representing the more external.

In addition to Rotter's I-E scale a number of other scales have been developed to measure the I-E construct in adults and in children (Battle & Rotter, 1963; Bialer, 1961; Crandall, Dathorsky, & Crandall, 1965; Cromwell, 1963; Green, 1971; Mischel, Zeiss, & Zeiss, 1974; Nowicki & Duke, 1973; Wilson, Duke & Nowicki, 1972; Nowicki & Strickland, 1973;



Shore, Milgram, & Malasky, 1971; Stephens & Delys, 1973). According to Hersch and Scheibe (1967) the test-retest reliability of the I-E scale "is consistent and acceptable varying between .49 and .83 for varying samples and intervening time periods" (p. 609). Hersch and Scheibe (1967) also note that "the performance of the subjects on the I-E scale is consistent with their performance on a variety of other self-report devices. The practical importance of this finding is that to some degree, inferences as to internality may be made on the basis of inspection of other instruments, such as ACL or CPI profiles" (p. 612).

#### The California Psychological Inventory

This test contains 480 forced choice items (12 duplicated items). The client is to mark these true or false as applied to him or her. The answers yield 18 standard scores, each on a scale intended to cover an important facet of interpersonal psychology. The scales are grouped into four major categories. Kelly (Buros, 1971) notes "All in all the CPI in this reviewer's opinion is one of the best, if not the best, available instrument of its kind" (p. 169).

According to Walsh (Buros, 1972) "for non incarcerated groups the test retest correlations are generally between .55 and .75 over a one year period" (p. 96). He also





indicates that "the strongest point of the CPI is undoubtedly the very sizable (more than 6,000 men and more than 7,000 women) and widely varied norm groups available" (p. 96).

Kelly (Buros, 1971) states that "there is convincing evidence that each of the scales has some validity when judged against life performance criteria" (p. 169).

#### Method of Data Analysis

Five variables were measured in the study on two different occasions. The variables included: (a) locus of control, (b) choice of therapist, (c) dominance (CPI), (d) sociability (CPI), and (e) sense of well-being (CPI). Four methods of data analysis were employed.

1. Chi square analyses for two and three way contingency tables of actual vs expected frequencies.

2. Pearson product moment correlations indicating relationships between each of the five variables: locus of control, choice of therapist, dominance, sociability, and sense of well-being.

3. One way analysis of variance and covariance.

4. Each variable on the pre and post-tests was measured by employing a two-way analysis of variance with repeated measures on one factor.



## CHAPTER IV

### RESULTS

The present study was designed to examine the relationship between locus of control, three dimensions of personality and the relationship these have with preference for therapy of alcoholics. This chapter describes the clients in each of the three groups and reviews the results of the study.

#### Description of the Clients in the Three Groups

The three groups of subjects who participated in the study have been designated: experimental group 1, experimental group 2, and a control group. Experimental groups one and two were both registered in a treatment program at Henwood. Experimental group 1 had a 28 day treatment program and experimental group 2 had a 21 day treatment program. The control group consisted of those patients who were involved in AADAC treatment programs but who were not a part of an intensive live-in program like that being offered at Henwood. The mean age of subjects in all three groups ranged from 40 to 42 years. The youngest subject was 18 and and the oldest 64 (see Table 4).



TABLE 4

DESCRIPTION OF EXPERIMENTAL AND

CONTROL GROUPS BY SEX AND AGE

<u>Item</u>	<u>Experimental Group 1</u>	<u>Experimental Group 2</u>	<u>Control Group</u>
Sex on pre-test	9 females	5 females	4 females
	19 males	22 males	21 males
Sex on post-test	7 females	5 females	4 females
	11 males	20 males	20 males
Range of ages	20-64 years	18-63 years	20-57 years
Mean age	41 years	42 years	40 years





## Test of Hypotheses

### Hypothesis Number 1

States that there will be no significant differences in the mean I-E scores between the experimental and control groups on the pre-test measures.

### Hypothesis Number 2

States that there will be no significant differences in the mean I-E scores between the experimental and control groups on the post-test measures.

Figure 4 shows the mean I-E scores for the three groups on the pre and the post-tests. A two way analysis of variance with repeated measures was used to determine the significance of the difference between the means. The results are presented in Table 5. The probability that the means were different ("A" main effects) is 0.5574. Thus hypotheses one and two are accepted indicating no difference in the three groups on the pre-test and post-test measures.

### Hypothesis Number 3

Mean I-E scores of alcoholics participating in experimental and control groups will not be less than 6.

Figure 4 reports the mean scores and compares graphically the pre and post-test I-E means for each of the three groups. None of the I-E means were less than 6, therefore we can reject the null hypothesis. According to the criterion cited earlier (Obitz, 1978) these groups scored more



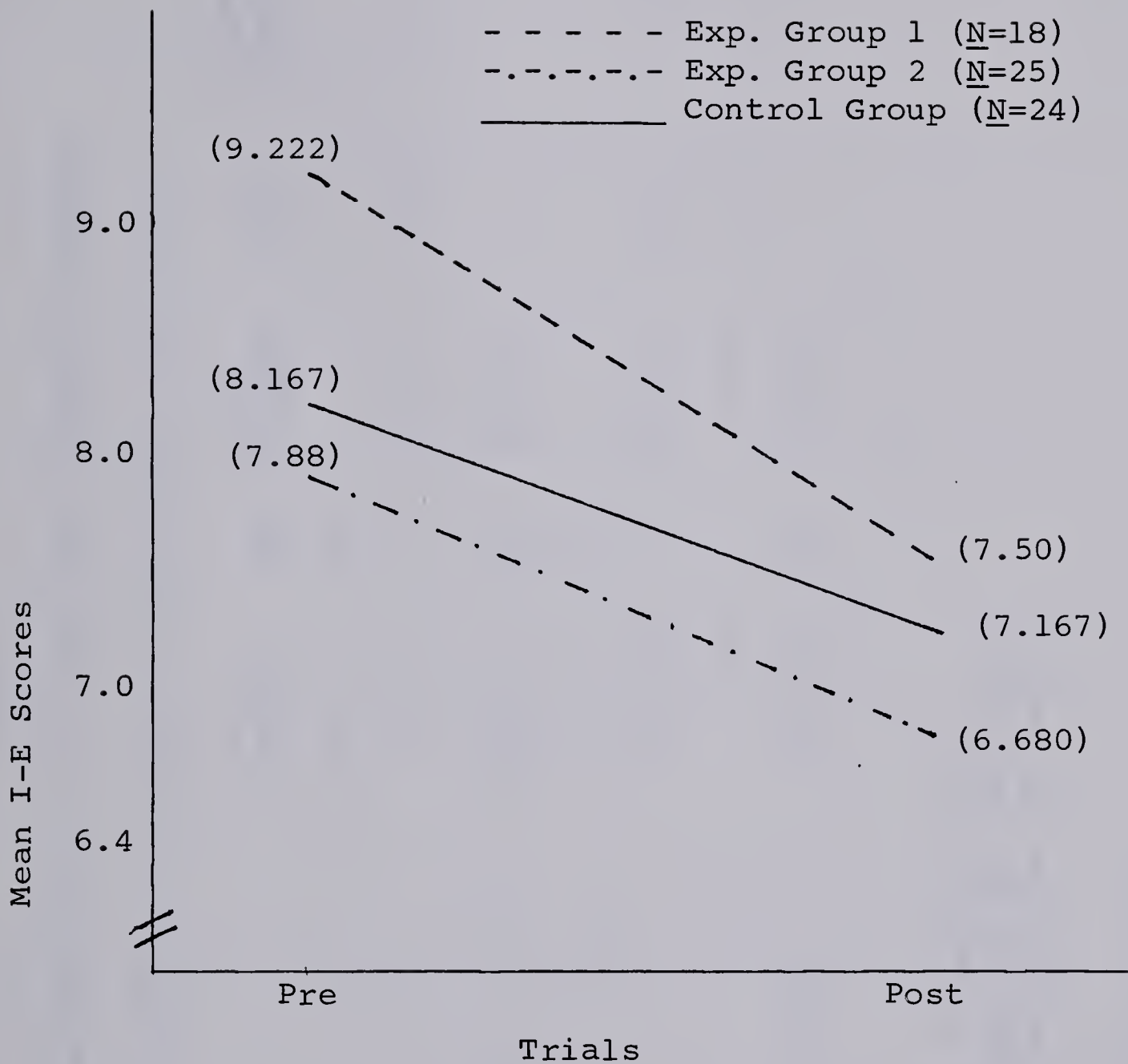


FIGURE 4

Graph Showing a Comparison of the Pre and Post-Test  
Mean I-E Scores for Each of the Three Groups



TABLE 5

A TWO WAY ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR ROTTERS I-E SCORES ON THE PRE AND POST TESTS

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>DF</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>Probability of Significance</u>
Between subjects	1448.15	66			
"A" main effects	26.24	2	13.12	0.59	0.5574
Subjects within groups	1423.56	64	22.243		
Within subjects	371.50	67			
"B" main effects	56.054	1	56.054	11.40	0.0013 *
'A*B' interaction	3.048	2	1.524	0.310	0.7347
'B' x subjects within groups	314.813	64	4.919		

\* p .0013 significant at the .01 level  
 p .5574 not significant at the .05 level  
 p .7347 not significant at the .05 level

"A" main effects = Group  
 "B" main effects = Pre-Post Tests





externally than expected. However, all three groups moved in the direction of greater internality between the pre and the post-tests.

#### Hypothesis Number 4

States that there will be no significant differences in mean I-E scores within the experimental and control groups.

A two way analysis of variance was used to determine the significance of the difference between the pre and post test means for each of the groups. As noted in Table 5 above, the difference is significant ( $F=11.40$ ,  $p < .001$ ). Therefore one can reject the null hypothesis.

Figure 5 below shows a comparison of the pre and post-test I-E means for the three groups of subjects.

#### Hypothesis Number 5

States that there will be no significant correlation between alcoholics' scores on the Rotter I-E and their scores on the Dominance, Sociability, and Sense of Well-Being scales of the CPI.

Table 6 below reports the pre and post-test inter-correlations among the five variables: locus of control, choice of therapist, dominance, sociability, and sense of well-being. Experimental and control group subjects who completed the pre and the post-tests have been included in the data. As can be noted there were significant negative



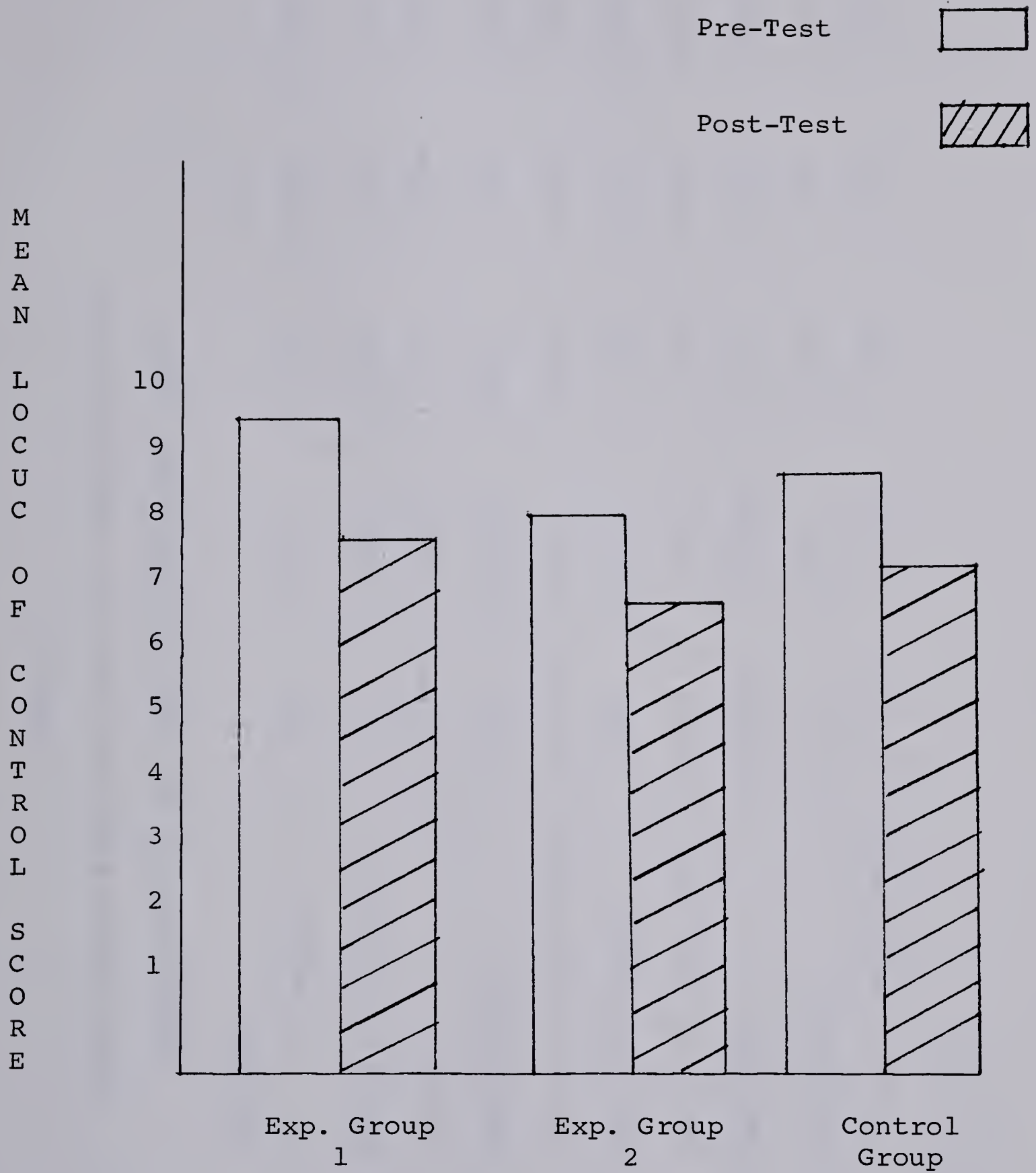


FIGURE 5

Comparison of Pre-Test Post-Test I-E Means for  
Experimental Groups 1 and 2 and the Control Group



TABLE 6

INTERCORRELATIONS AMONG THE FIVE VARIABLES UNDER

EXAMINATION ON THE PRE AND POST-TESTS (N=67)

<u>Condition</u>	<u>Variable</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Pre-test	1. Locus of control	1.000	-0.035	-0.341	-0.169	-0.375*
	2. Choice of therapist	-0.035	1.000	0.308	0.333*	0.192
	3. Dominance	-0.341*	0.308*	1.000	0.580*	0.398*
	4. Sociability	-0.169	0.333*	0.580*	1.000	0.353*
	5. Sense of well-being	-0.375*	0.192	0.398*	0.353*	1.000
Post-test	1. Locus of control	1.000	-0.219	-0.330*	-0.212	-0.305*
	2. Choice of therapist	-0.219	1.000	0.340**	0.143	0.251**
	3. Dominance	-0.330*	0.240**	1.000	0.643*	0.504*
	4. Sociability	-0.212	0.143	0.643*	1.000	0.476*
	5. Sense of well-being	-0.305*	0.251**	0.504*	0.476*	1.000

\* Significant at .01

\*\* Significant at .05





correlations on the pre-tests and on the post-tests between locus of control, dominance, and sense of well-being. The correlation between locus of control and sociability was not significant. Therefore one can reject hypothesis number 5 and conclude that there is a correlation between locus of control, dominance, and sense of well-being.

According to the results as Ss' scores became more internal, they also exhibited an increase in dominance and a greater sense of well-being. This finding seems consistent with the idea that as individuals become more internal they also exhibit greater mental health.

#### Hypothesis Number 6

States that there will be no significant correlation between alcoholics' scores on the Rotter I-E scale and their choice of a directive vs non-directive therapist.

In reference to this hypothesis we will refer again to Table 6. Correlations between the I-E score and "choice of therapist" on the pre and post-tests are indicated by an asterisk. These are -0.035 on the pre-test and -0.219 on the post-test. Neither correlation was significant (.05). Therefore, one can accept the null hypothesis.

#### Hypothesis Number 7

States that there will be no significant differences between male and female mean pre-test and post-test scores on the Rotter I-E, the dominance, sociability, and sense of



well-being scales of the CPI.

For purposes of discussion hypothesis number 7 can be divided into the following sub-hypotheses. There will be no significant differences between male and female scores on: Rotter's I-E, Dominance (CPI), Sociability (CPI), and Sense of Well-Being (CPI).

a) Rotter's I-E

A two way ANOVA with repeated measures assessed the difference between pre and post-test locus of control scores for males and females. No significant difference was found in the between group mean scores for males and females on locus of control ( $F$  Ratio 0.49,  $p > .05$ ). However, there was a significant within group shift in mean I-E scores for males and females ( $F$  Ratio 6.21,  $p < .05$ ). See Table 7 and Figure 6.

b) Dominance (CPI)

A two way ANOVA with repeated measures assessed the difference between the pre and post-test Dominance scores for males and females. No significant difference was found in the between group mean scores for males and females in Dominance ( $F$  Ratio 1.41,  $p > .05$ ). However, there was a significant shift in mean dominance scores within groups ( $F$  Ratio 10.59,  $p < .01$ ). Refer to Table 8 and Figure 7.



TABLE 7

A TWO WAY ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR MALES AND FEMALES ON LOCUS OF CONTROL (I-E)

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>DF</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>Probability of Significance</u>
Between subjects	1448.15	66			
"A" main effects	10.93	1	10.93	0.49	0.49
Subjects within groups	1437.23	65	22.11		
Within subjects	371.50	67			
"B" main effects	30.12	1	30.12	6.21	0.02 *
'A*B' interaction	2.19	1	2.19	0.45	0.50
'B' x subjects within groups	315.40	65	4.85		

\* p .02 significant at the .05 level  
p .49 not significant at the .05 level  
p .50 not significant at the .05 level

"A" main effects = Sex  
"B" main effects = Pre-Post Tests





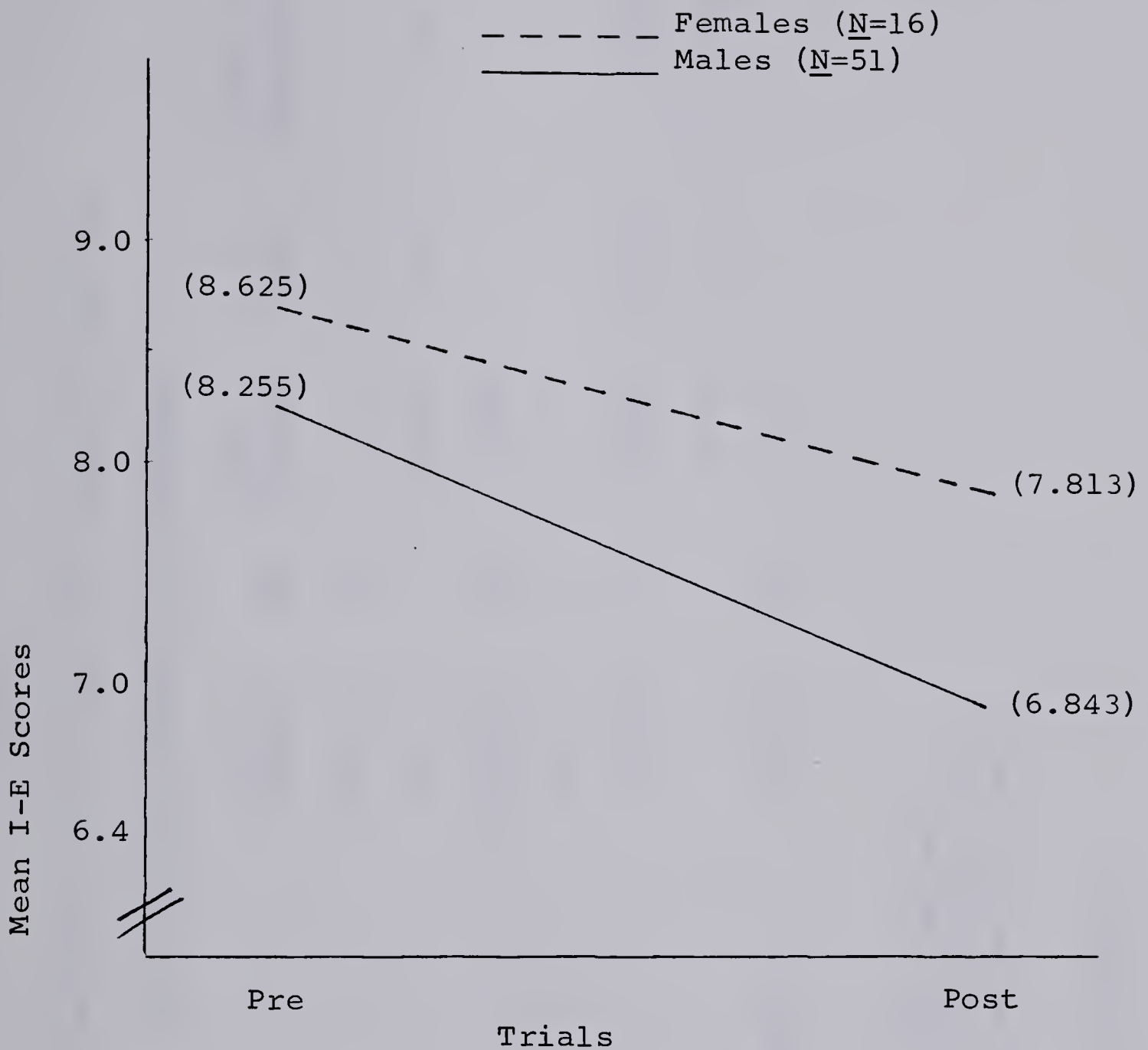


FIGURE 6

Graph Showing a Comparison of the Pre and Post-  
Test I-E Mean Scores for Males and Females



TABLE 8

A TWO WAY ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR MALES AND FEMALES ON DOMINANCE

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>DF</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>Probability of Significance</u>
Between subjects	4813.25	66			
"A" main effects	102.31	1	102.31	1.41	0.24
Subjects within groups	4710.94	65	72.48		
Within subjects	707.50	67			
"B" main effects	98.80	1	98.80	10.58	0.002 *
'A*B' interaction	15.58	1	15.58	1.67	0.20
'B' x subjects within groups	606.50	65	9.33		

\* p .002 significant at the .05 level  
p .24 not significant at the .05 level  
p .20 not significant at the .05 level

"A" main effects = Sex  
"B" main effects = Pre-Post Tests.



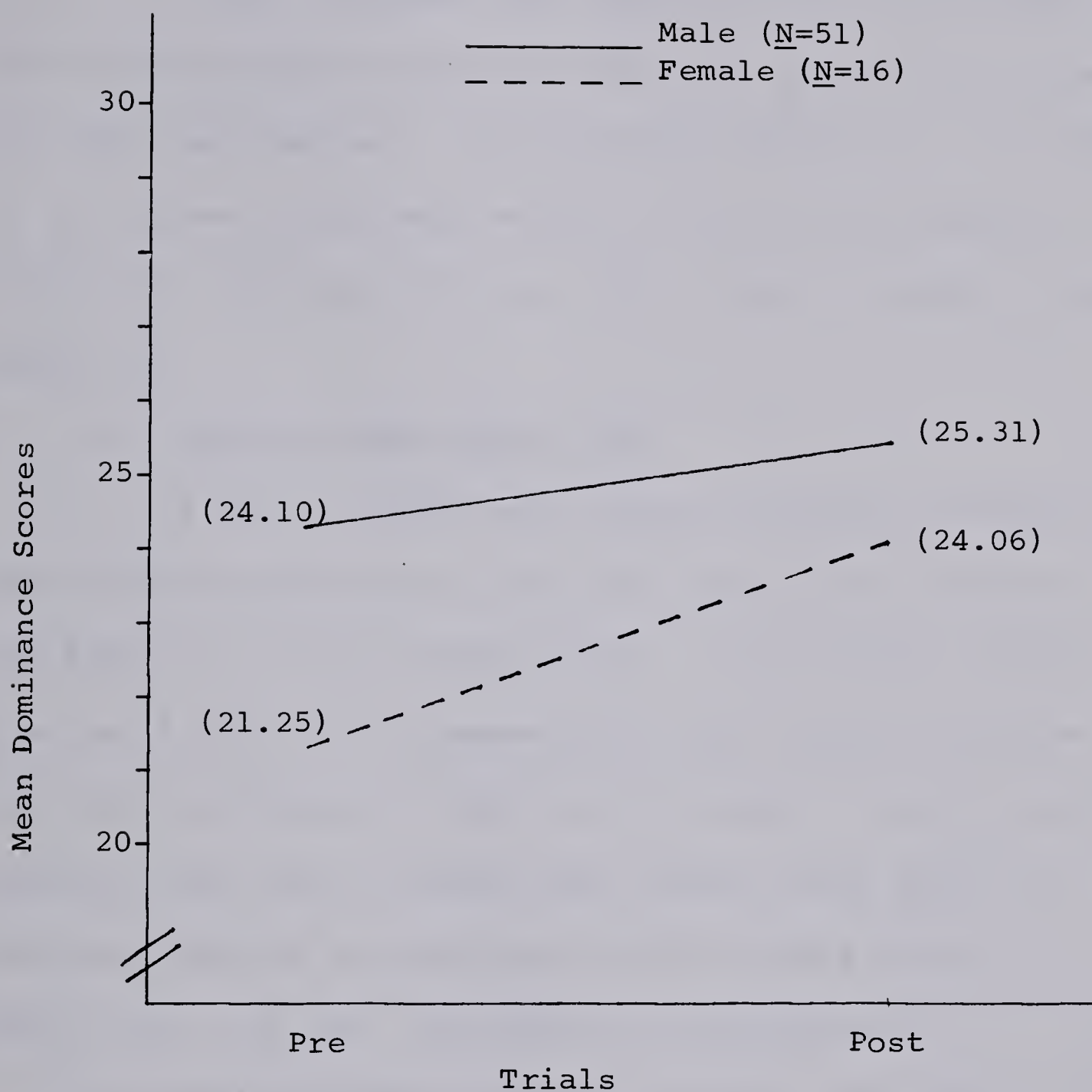


FIGURE 7

Graph Showing a Comparison of the Pre and Post-Test Dominance Mean Scores for Males and Females



c) Sociability (CPI)

A two way ANOVA with repeated measures assessed the difference between pre and post-test Sociability scores for males and females. No significant difference was found in the between group mean scores for males and females in Sociability ( $F$  Ratio 3.30,  $p > .05$ ). Refer to Table 9 and Figure 8.

d) Sense of Well-Being (CPI)

A two way ANOVA with repeated measures assessed the difference between pre and post-test scores for males and females on Sense of Well-Being. A significant difference was found in the between group mean scores for males and females in Sense of Well-Being ( $F$  Ratio 4.42,  $p < .05$ ). However, there was no significant within group shift for males and females in mean Sense of Well-Being scores ( $F$  Ratio 3.42,  $p > .05$ ). See Table 10 and Figure 9.

In summary Hypothesis Number 7 states that there will be no significant differences between male and female mean pre-test and post-test scores on the Rotter I-E, the Dominance, Sociability, and Sense of Well-Being scales of the CPI. One can accept the null hypothesis and conclude that there was no significant difference between male and female scores on the Rotter I-E, and the Dominance and





TABLE 9

A TWO WAY ANALYSIS OF VARIANCE WITH REPEATED MEASURES

FOR MALES AND FEMALES ON SOCIABIABILITY

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>DF</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>Probability of Significance</u>
Between subjects	3247.82	66			
"A" main effects	135.35	1	135.35	2.83	0.10
Subjects within groups	3112.48	65	47.88		
Within subjects	612.00	67			
"B" main effects	29.34	1	29.34	3.30	0.07
'A*B' interaction	1.12	1	1.12	0.13	0.72
'B' x subjects within groups	578.37	65	8.90		

p .10 not significant at the .05 level  
p .07 not significant at the .05 level  
p .72 not significant at the .05 level

"A" main effects = Sex  
"B" main effects = Pre-Post Tests



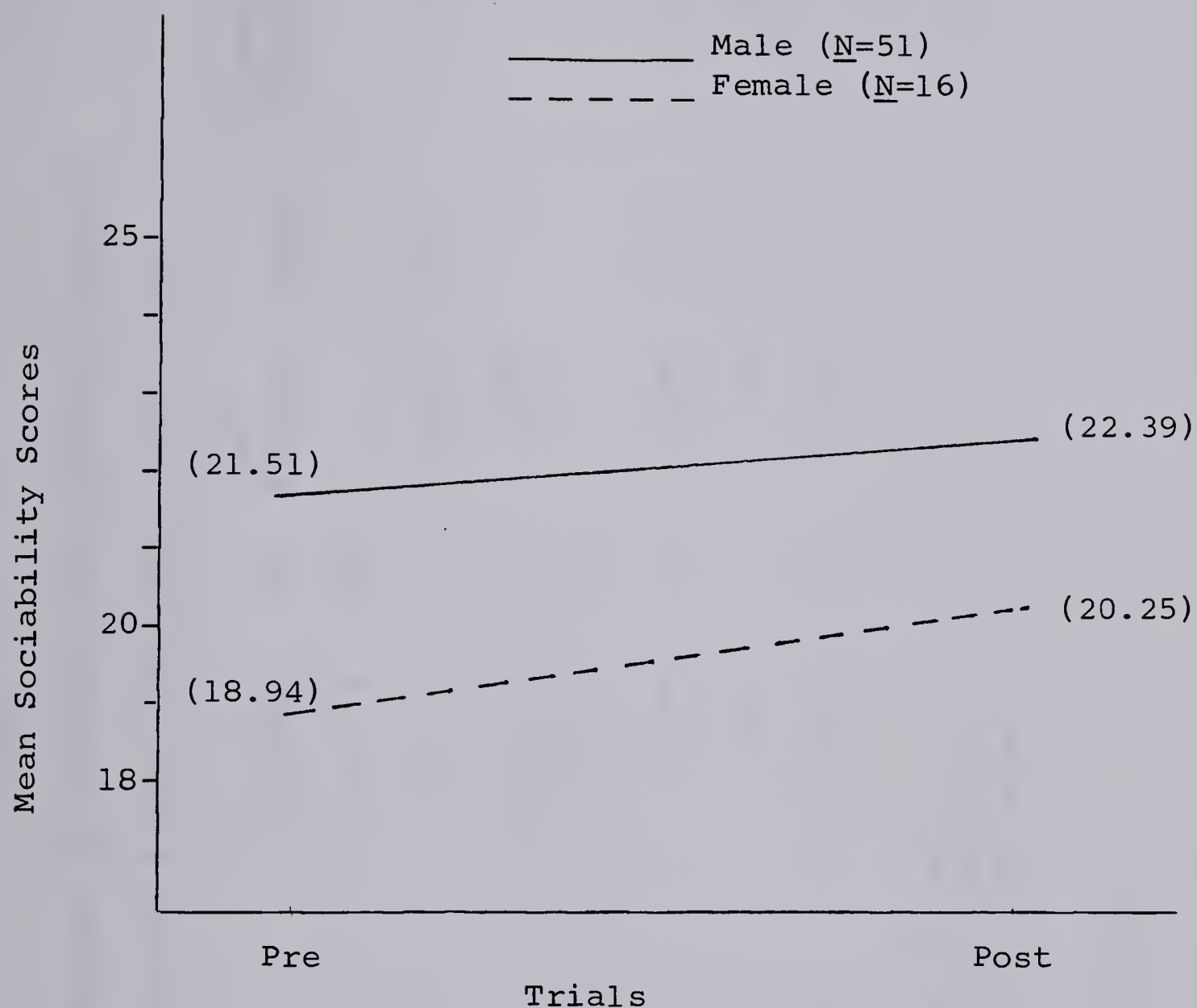


FIGURE 8

Graph Showing a Comparison of the Pre and Post-  
Test Mean Sociability Scores for Males and Females



TABLE 10

A TWO WAY ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR MALES AND FEMALES ON SENSE OF WELL-BEING

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>DF</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>Probability of Significance</u>
Between subjects	5760.75	66			
"A" main effects	367.13	1	367.13	4.42	0.04 *
Subjects within groups	5393.63	65	82.98		
Within subjects	937.00	67			
"B" main effects	45.96	1	45.96	3.42	0.07
'A*B' interaction	0.04	1	0.04	0.00	0.96
'B x subjects within groups	873.81	65	13.44		

\* p .04 significant at the .05 level  
p .07 not significant at the .05 level  
p .96 not significant at the .05 level

"A" main effects = Sex  
"B" main effects = Pre-Post Tests





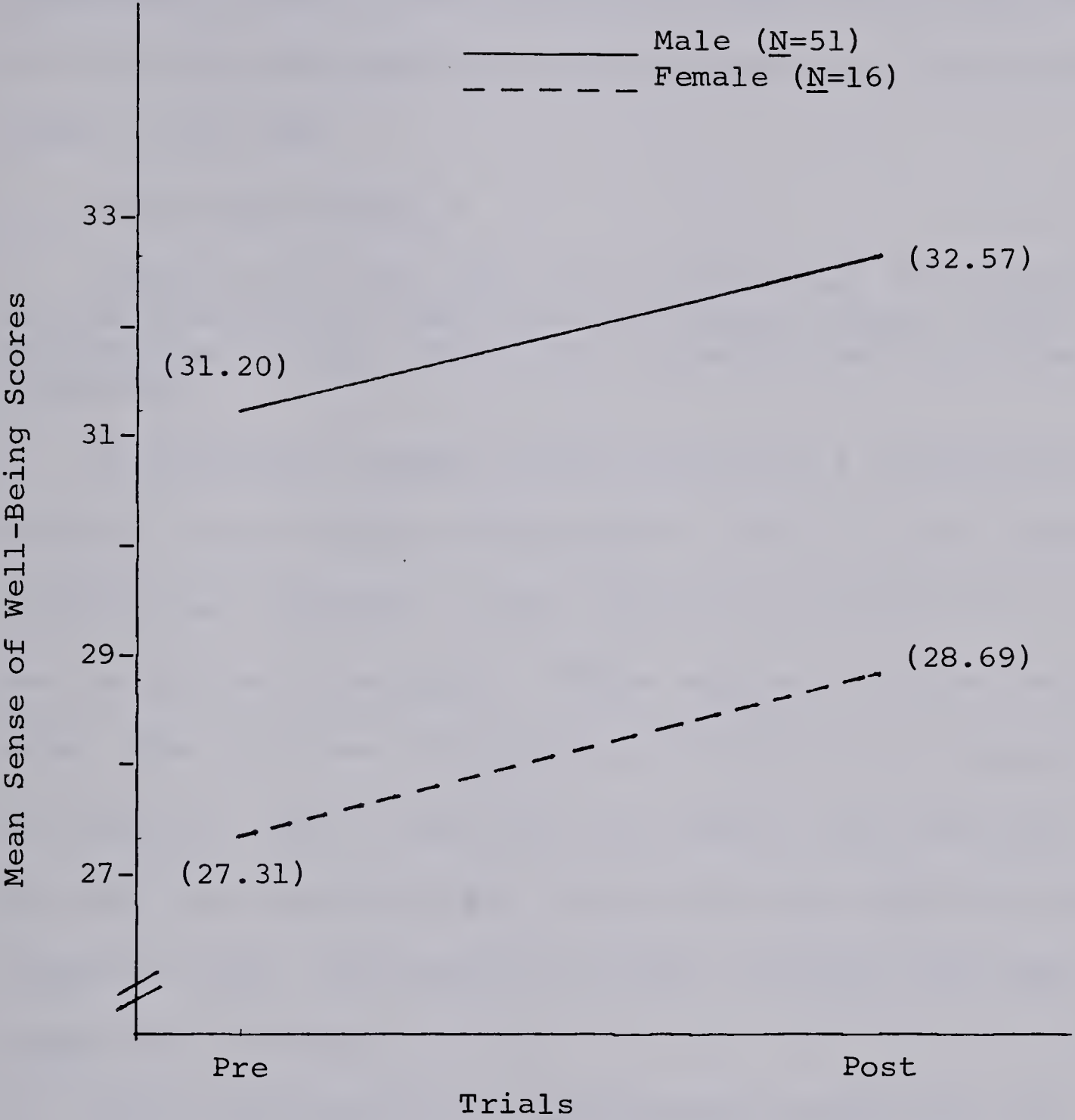


FIGURE 9

Graph Showing a Comparison of the Pre and Post-Test  
Mean Sense of Well-Being Scores for Males and Females



Sociability scales of the CPI. However, one may reject the hypothesis in part since there was a significant difference between male and female scores on the Sense of Well-Being scale of the CPI.

#### Hypothesis Number 8

States that there will be no significant differences in the mean pre-test and post-test scores between males and females in their choice of a directive and non-directive therapist.

To determine whether or not there was a relationship between sex and choice of therapist a three way chi square analysis was conducted. This analysis considered group vs sex vs choice of therapist. Three separate analyses were made. The first was the pre-test choices of the original 80 subjects, some of whom did not complete the post-test. The last two considered the choices of those subjects who completed both. The results of these analyses have been summarized in Table 11.

With each analysis no significant relationship was found between sex and choice of therapist ( $p > .05$ ). Therefore, one can accept the null hypothesis.

#### Summary

The results of the statistical analyses presented in this chapter supported five of the hypotheses indicating:



TABLE 11

RESULTS OF CHI SQUARE ANALYSES SHOWING THE RELATIONSHIP  
 BETWEEN SEX AND CHOICE OF THERAPIST. ( $p > .05$ )

<u>Source</u>	<u>N</u>	<u>Chi Square</u>	<u>DF</u>	<u>Probability</u>
Sex and choice	80 (Pre)	0.130	1	0.718
Sex and choice	67 (Pre)	1.237	1	0.266
Sex and choice	67 (Post)	1.071	1	0.301



no differences between the experimental and control groups on locus of control; no correlation between locus of control and choice of therapist; and no differences between male and female scores on Rotter's I-E, and on the Dominance and Sociability scales of the CPI.

Three of the hypotheses and part of a fourth were rejected indicating that: alcoholics in the study were more external; there was a correlation between locus of control, Dominance, and Sense of Well-Being; mean locus of control scores for the experimental and control groups differed significantly between the pre and the post-test. Lastly, a significant difference was found between male and female Sense of Well-Being scores (CPI).





## CHAPTER V

### SUMMARY, DISCUSSION, AND RECOMMENDATIONS

#### Summary

Many theoreticians have grappled with the elusive "alcoholic personality" hoping to predict and control the alcoholics' self-destructive behaviors. While the treatment for alcoholic clients including AA has proved beneficial there are many for whom treatment has been of little value. Clients who failed to improve may have been helped if the treatment program was better suited to their needs. For example, if it were shown that clients with characteristic A would benefit more from therapy A and that clients with characteristic B could benefit more from therapy B then success in treatment would not only increase but one would see more efficient treatment, less recidivism, better planning on behalf of the client, and a significant reduction in health care costs. The present study represents a desire to more accurately define the nature of the alcoholic client.

The study examined the relationship between locus of control, three dimensions of personality, and the relationship these have with preference for therapy of clients. Three groups were tested, two experimental groups and one control group, representing a total of 67 clients. The



first two groups included male and female patients who were registered in a 28 day and a 21 day live-in treatment program at Henwood rehabilitation center. The control group included people who were not receiving the intensive live-in program but who were attending other AADAC outpatient treatment programs. Subjects were asked to complete three different tasks on two different occasions. These tasks consisted of (a) completion of Rotter's Internal/External Locus of Control Scale, (b) viewing a videotape of a directive and nondirective therapist and choosing which therapist they would have preferred.

Although this study did employ an experimental and control group design, no significant differences were found between these groups. This may reflect the fact that clients in both groups were receiving some form of therapy at the time of the study. Since there were no differences the following remarks will be confined to an examination of the total subject group.

### Nature of the Alcoholic

#### Locus of Control

One of the difficulties in defining locus of control has been the lack of definite criteria to determine who is internal and who is external. Ss on Rotter's I-E scale can



receive a possible score from 0 to 23, therefore where does one place the cut off points. As a result of this problem "alcoholics could be defined as internally oriented in one study, externally oriented in another" (Obitz, 1978, p. 379). After reviewing ten studies which included 835 male alcoholic subjects, Obitz (1978) concluded that "the more internally controlled alcoholic should be defined by a locus of control score of 6 or below, the more externally controlled alcoholic by a score of 7 or above" (p. 379). When examined, the various studies summarized in Table 2 by Rohsenow and O'Leary (Chapter 2), it was found that nine of the I-E means for alcoholics were internal while three of the means were external. The present study found the mean I-E scores for male and female clients to be greater than seven therefore more external. This finding seems to support the contention made by Rotter (1971), Lefcourt (1976), Goss and Morosko (1970) that external control is related to more dysfunctional behavior. This idea seems to gain support when it is noted that Ss scores on the I-E scale shifted towards greater internality between the pre and the post-test. The latter finding is in agreement with a study by O'Leary and Donovan (1975) who "demonstrated that an individual's perceived locus of control becomes significantly more internal after





therapeutic interventions" (p. 361). Further support is provided by considering the mean dominance, sense of well-being, and sociability scores. All increased significantly between the pre and post test indicating greater dominance, greater sense of well-being, and an increase in sociability (See Tables 12, 13, and 14 in Appendix D).

How can one explain some of the differences: Why does one group of alcoholics appear more internal while another more external? Some of the researchers explain the differences by criticizing the methodology of the research while others point to difficulties with the I-E scale itself. Janzen and Beeken (1973) indicate that "the locus of control scale may not be measuring exactly what it purports to measure" (p. 299). They cite studies by Coan (1968), Gurin, Gurin, Lao, and Beatie (1969), and Mirels (1970) which indicate that the I-E scale is more concerned with "social and political events rather than items dealing with personal qualities" (p. 299).

Janzen and Beeken (1973) have also criticized two other aspects of the I-E scale. Firstly, they indicate that an individual could give a different response to a question "on different dimensions" thus making it difficult to determine what point of view is being used as a basis for a



person's choice. For example, question number 18 on the Rotter scale allows the following responses: (a) "Most people don't realize the extent to which their lives are controlled by accidental happenings" (b) "There is really no such thing as luck" (Rotter, 1966, p. 11). According to Janzen and Beeken

If we orient ourselves in terms of control ideology (a "world view") then philosophical determinism might propel us to answer "b", while a philosophy of "hazard" dictates "a". We might be very tempted to answer "a" if we are black, or Jewish, or short, or beautiful, or identify some accident of our situation as being extremely important to success. We would answer "b" if we strongly believed that none of these "accidents" were at all important. On the dimension of personal control ideology we might choose "a" if our personal history of success/failure included important results of "accidents" and "b" if such a history showed the results of luck to be minimal compared to the effects of our wilful choices and actions. (p. 299)

Secondly, it has been pointed out that the forced choice nature of the I-E scale often makes it difficult for the respondent to choose between the two extremes presented. The client has to be either internal or external; there is no in between.

Whatever the reason for the differences from one study to the next it should be recognized that the locus of control



concept and the I-E scale are somewhat more complex than suggested by the majority of the studies. Before the instrument is used as a possible means of matching clients to treatment the validity needs to be thoroughly reviewed.

Differences in results from one study to another while appearing contradictory may in fact be legitimate. It may simply reflect the fact that group A has a higher percentage of externals while group B has more internals. This idea seems to agree with Pattison's (1976) theory that we are not dealing with a homogeneous population of alcoholics but with a variety of subpopulations.

The difficulty with many of the studies would seem to rest with the statistical techniques which attempt to summarize findings in terms of one mean score. There is a need for researchers to report the distribution of their scores! Figures 10 and 11 below show the distribution of scores for subjects on the pre and post tests.

Thirty percent of the clients had a score of 6 or below on the pre-test while seventy percent had a score of 7 or above. Post-test scores changed the ratio to 46% internal and 54% external. By reporting the individual scores one can gain a more accurate description of the individual client and a possible basis for describing sub-populations.





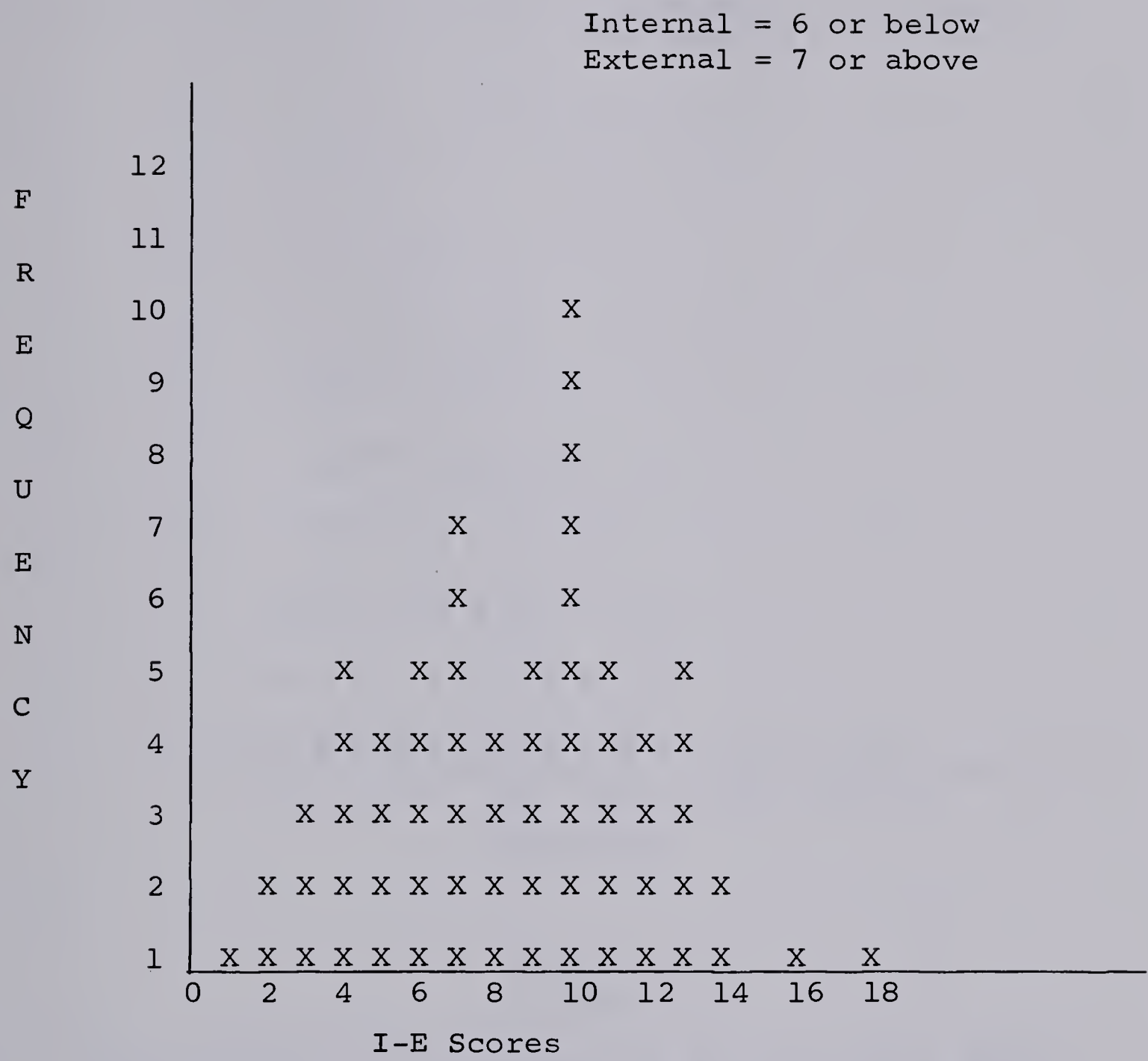


FIGURE 10  
Distribution of I-E Scores for the Pre-Test (N=67)





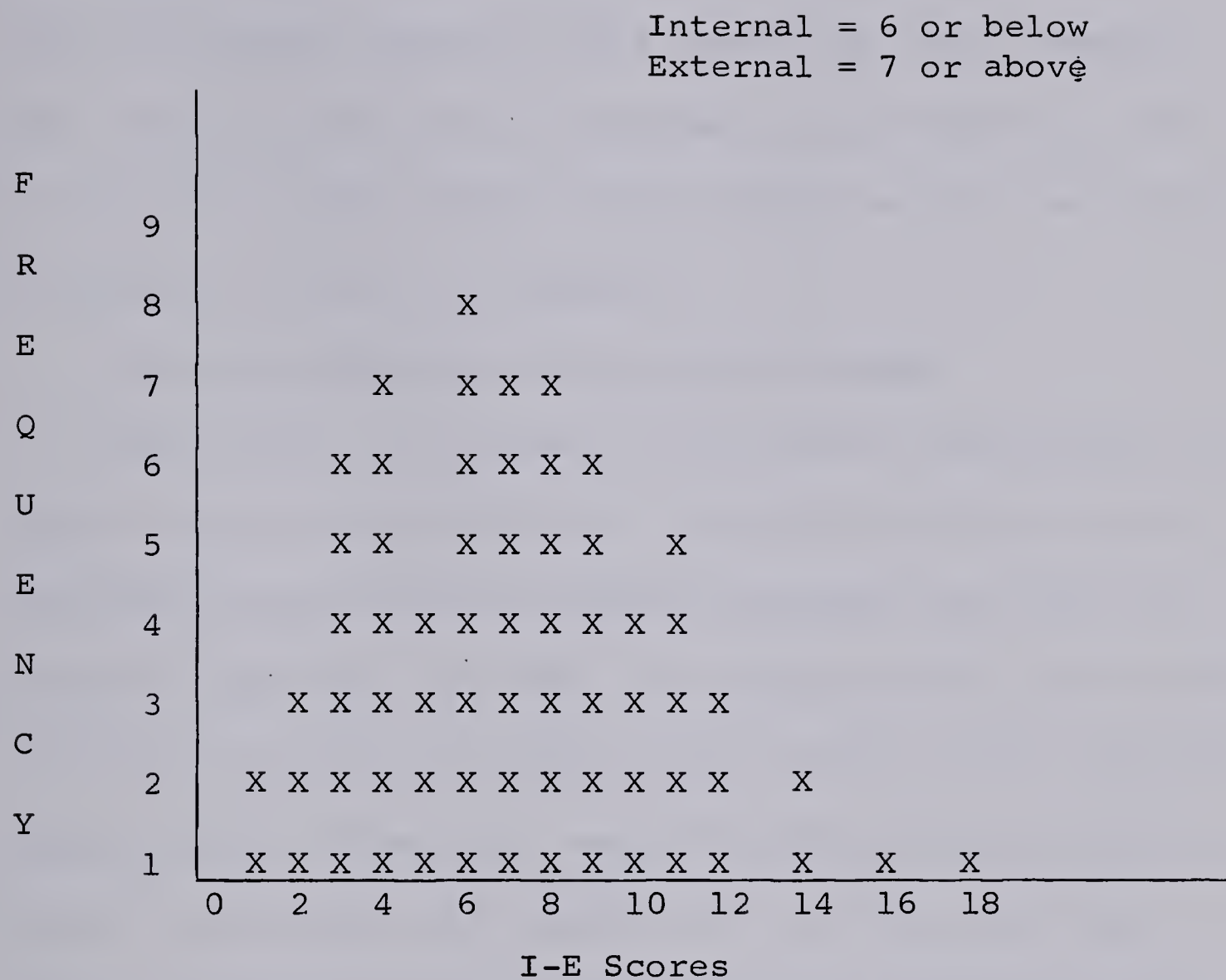


FIGURE 11

Distribution of I-E Scores for the Post-Test (N=67)



Bowen and Twemlow (1978) have noted that "the range of locus of control scores in this population would suggest that alcoholics are not a homogeneous population" (p. 52). On the basis of the above findings there may be some value in matching clients to treatment.

#### Choice of Therapist and Locus of Control

Obitz (1975) in a study of "alcoholics perceptions of certain counselling techniques" indicated that his clients "reliably preferred the directive approach over the non-directive approach" (p. 190). The present study arrived at the same conclusion with 70% of the clients on the pre-test choosing Ellis (directive) and 30% of the clients choosing Rogers (non-directive). On the post test the split was 36/64 in favor of Ellis. The overwhelming preference for Ellis leads one to speculate about the reasons for their choice. Clients in the study were asked to state why they chose a particular therapist. The majority of those choosing Ellis indicated he gave advice, was more direct, and gave more suggestions. Those who preferred Rogers indicated that he let the client do most of the work, brought out the clients' feelings, and guided instead of directed. One client summed up the differences by stating "while Roger's interview with Gloria left her in an apparent state of



melancholia (shared by Rogers) Ellis seemed to guide her through her problem to a possible constructive solution to it. Rogers was a good listener but the patient was there for therapy which I believe, Ellis provided."

Some therapists may suggest that these subjects are looking for easy solutions to their problems that they are choosing the path of least resistance and consequently least growth. This may be the case with the chemically dependent person. Whereas alcohol and other drugs provide a quick and easy answer to problems subjects look for a therapist who can do likewise. It seems probable that clients fail to conceptualize the therapeutic process, that they fail to understand that therapeutic change can be a long term commitment. However, can one necessarily assume that they do not know what is best for them?

It may be worthwhile to consider Obitz (1975) suggestion that "clients who prefer a directive approach could be assigned a directive therapist, clients who prefer a non-directive approach could be assigned a non-directive therapist" (p. 190).

There has been some evidence to indicate that differential treatment of internals and externals is appropriate (Moursund, 1976). On the basis of this finding it was





hypothesized that there would be a relationship between locus of control and choice of therapist with internals choosing the non-directive approach and externals the directive approach. This idea was not supported by the research data. Whereas, some clients who were internal did choose Rogers others who were external also chose Rogers. At least two reasons can be provided to explain the lack of relationship between variables. As indicated in the previous section the I-E may not have been an adequate measure of the concept. Secondly, the films could be criticized along the same lines as Rotter's I-E scale. Were the clients choosing on the basis of directiveness and non-directiveness or were they using some other dimensions to make their choice?

#### Locus of Control and Personality

Much debate has surrounded the relationship of locus of control to other personality variables. Hersch and Scheibe (1967) correlated the scores of college males and females on the I-E scale and on the California Psychological Inventory. They found the "internal scorer is higher on the dominance, tolerance, good impression, sociability, intellectual efficiency, achievement via conformance, and well-being scales" (p. 612). A portion of the present study was



designed to replicate the above findings. Significant correlations (  $< .05$ ) were found between locus of control and the two CPI variables Dominance and Sense of Well-Being. No significant correlation was found between locus of control and sociability. As treatment progressed, however, subjects did show a significant increase in all three variables.

Part of the data analysis attempted to take into consideration possible differences between male and female subjects. One must be cautious when interpreting this data since a very small number of female subjects took part.

Henderson (1978) indicates that "women who develop drinking problems show different patterns and characteristics from the male alcoholic" (p. 5). The present study found that on all of the variables with the exception of one there were no significant differences between male and female subjects. The interesting finding, however, was that male subjects demonstrated a greater sense of well-being than female subjects. This seems consistent with previous research comparing male and female alcoholics. The latter were found to be more depressed and lower in self-esteem (Kinsey, 1968; Wood & Duffy, 1966).

One explanation for the findings above could be societies' attitude towards the female alcoholic. Fraser (1973)



notes that "we have always come down hard on drunks. We have always come down harder on drunk women" (p. 3). He also points to studies which

have shown convincingly that the woman who drinks is more highly criticized than any drinking man. Her assault on the bottle represents the breaking of a more rigid taboo, the shattering of a deeply divined image of femininity. Regardless of her social or economic status, the woman alcoholic faces greater castigation and rejection from a less tolerant society. (p. 4)

This rejection obviously increases a woman's sense of guilt and in turn lowers her sense of well-being.

Women's changing role may also be an important factor influencing this difference between males and females. In the last few years more women have begun to work outside the home while still trying to maintain their role as wife and mother. This added pressure may create anxiety and result in a lessened sense of well-being.

#### Recommendations for Further Research

1. Rotter's locus of control scale could be administered to a group of alcoholics when they first enter treatment. Next internals and externals could be identified and three groups of each could be formed. Each of the groups could then be assigned to one of three counseling conditions.





Either a non-directive therapist, a directive therapist, or to a therapist who employs both approaches (eclectic condition). Clients could then be followed-up to determine if success in treatment could be related to locus of control and counseling condition.

2. Alcoholics who are entering an inpatient or outpatient treatment program, after detoxification, could be assigned to one of two treatment conditions. Condition one (experimental) would allow clients to choose their therapist. This could be done by having them view a videotape illustrating different counseling approaches (maximum three) after which they would select the preferred counselor. Condition two (control) subjects would not be given a choice but would be assigned to the therapists randomly. Patients could then be followed-up to determine if those who had a choice were any more successful than those who did not.

3. Replicate the present study with a greater number of male and female clients and test for differences.

4. A follow-up study on this client group could be carried out to determine what changes occur in locus of control for those who completed treatment and those who did not.

5. Compare a group of recovered alcoholics and non-





alcoholics on locus of control, choice of therapist, and the three CPI variables (dominance, sociability, and sense of well-being). Determine whether non-alcoholics or recovered alcoholics scores become more internal over time and/or if they show increases on the three CPI variables.

6. Obitz (1978) developed normative data for male alcoholics; it would be wise to develop similar data for female alcoholics.

7. A comparison could be made between alcoholic locus of control scores and other variables of the CPI (excluding the three considered in the present study).

8. As noted in the study there was a shift in mean locus of control scores (between pre and post test) in the direction of greater internality. A treatment program could be designed to change a subject's locus of control. The purpose of the treatment would be to shift locus of control and not to treat directly the alcohol problem. Subjects could be assigned randomly to one of two conditions. One group would receive a regular treatment program supplemented by the locus of control treatment. The second group would only receive the regular treatment regime. After treatment a subject's locus of control could again be determined and the two groups above could be compared to determine if there



were differences in treatment success.

9. A comparison could be made between different methods of determining locus of control. For example, the I-E scale could be compared with an interview technique to determine if the findings are consistent.

10. An individual study might be conducted where one individual would be studied in great detail. Those clients selected could include individuals who score at the extremes of the Rotter scale. What choices do they make? How do they progress in treatment and who seems to grow the most as determined by the client, counselor, and/or friends?

11. Janzen and Beeken (1973) have made a recommendation which seems pertinent to any further studies of this type. The recommendation is as follows:

Research workers who are interested in locus of control will need to construct a scale in which the items range over a continuum of controlling forces (slight to extreme), where the subjects are asked to respond with a scaled measure to the extent to which they feel influenced by each item. Luck, fate, powerful others, and unpredictable events would then be subsets within a scale which could also include more realistic physical social controls. (p. 300)

## Conclusions

A review of the literature indicates that many of the



studies are either inconclusive or contradictory. Researchers disagree about: the definition of alcoholism, the locus of control of the alcoholic, and the best way to treat the alcoholic. All of the evidence suggests that we are dealing with an extremely complex individual who cannot be effectively treated until he or she is better understood. Those in treatment often react to this seeming confusion by adopting what Pattison has called the "shotgun approach" hoping intuitively that something will be effective. The approach needs to be one of systematically trying to match clients to treatment. This could be facilitated if treatment programs could risk moving away from a reliance on the eclectic types of programs towards offering specific forms of treatment, e.g., directive, non-directive, and behavior modification. It may then be possible to determine what is effective and for whom.

The results of the following study lend support to the contention that: alcoholics have a more external locus of control; locus of control is related to other personality variables. As clients moved in the direction of greater internality their scores on the CPI variables, dominance, sociability, and sense of well-being rose which supports the idea that internals are healthier than externals. The





study also found males and females to differ in sense of well-being with males scoring higher in this category. This may point to the fact that society is still less accepting of the female alcoholic. No relationships were found between locus of control and choice of therapist. Further study needs to be conducted with a larger sample to replicate these findings, to examine further the problem of matching clients to treatment, and to examine the validity of Rotter's I-E scale.



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APPENDIX A  
HENWOOD REHABILITATION CENTER





### Henwood Rehabilitation Center

Henwood is an in-patient treatment centre for drug dependencies including alcoholism, operated by the Alberta Alcoholism and Drug Abuse Commission. It is located near Edmonton a few miles northeast of the city limits on Highway 15. It has 64 patient beds, 50 for males and 14 for females, arranged in dormitory style.

Admission to Henwood is wholly voluntary, though in most cases individuals are referred to Henwood by a professional person or agency. Application forms are available from Commission offices, hospitals, social agencies and most physicians.

The normal stay at Henwood is twenty-eight days with the possibility of a later return for a special "repeater" programme for fourteen days.

In addition to the treatment component, Henwood also has some educational services. The educational programs conducted at the centre are typically of the week long, live-in type.

There are two basic programs. The first program offers basic information about alcoholism and explores attitudes. In addition, this course introduces the participants to some practical competencies needed to work effectively with the alcoholic. It is considered that a vital learning component of this program is that while the participants are involved with the educational course, they are also in association with alcoholics seeking recovery. The alcoholics in treatment are a most important source of experience and information.

The first course has a definite focus on alcoholism. The second course has a definite focus on skills training. The method followed in the second course is a modified microcounselling program.



APPENDIX B

DESCRIPTION OF THE TEST MATERIALS



## Rotter's Internal-External Locus of Control Scale

### DESCRIPTION.

The scale consists of 29 items. Twenty three of the items measure the locus of control construct and 6 items are filler items. The questions are arranged in pairs, in a forced choice format.

In addition to Rotter's I-E scale a number of other scales have been developed to measure the I-E construct in adults and in children (Battle and Rotter, 1963; Bialer, 1961; Crandall, Kathorsky and Crandall, 1965; Cromwell, 1963; Green, 1971; Mischel, Zeiss and Zeiss, 1974; Nowicki and Duke, 1973; Nowicki and Strickland, 1973 Shore, Milgram and Malasky, 1971; Stephens and Delys, 1973; Wilson, Duke and Nowicki, 1972). According to Hersch and Scheibe (1967) the test-retest reliability of the I-E scale "is consistent and acceptable varying between .49 and .83 for varying samples and intervening time periods.





INSTRUCTIONS FOR THE I-E SCALE

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief: obviously there are no right or wrong answers.

Your answers to the items on this inventory are to be recorded on a separate answer sheet which is loosely inserted in the booklet. REMOVE THIS ANSWERSHEET NOW. Print your name and any other information requested by the examiner on the answer sheet, then finish reading these directions. Do not open the booklet until you are told to do so.

Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice. Find the number of the item on the answer sheet and black-in the space under the letter a or b which you choose as the statement more true.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice; do not be influenced by your previous choices.



THE I-E SCALE

- |    |    |   |   |   |
|----|----|---|---|---|
| 1. | a. | Children get into trouble because their parents punish them too much.                                 | a | b |
|    | b. | The trouble with most children nowadays is that their parents are too easy with them                  |   |   |
| 2. | a. | Many of the unhappy things in people's lives are partly due to bad luck.                              | a | b |
|    | b. | People's misfortunes result from the mistakes they make.  |   |   |
| 3. | a. | One of the major reasons why we have wars is because people don't take enough interest in politics.   | a | b |
|    | b. | There will always be wars, no matter how hard people try to prevent them.                             |   |   |
| 4. | a. | In the long run people get the respect they deserve in this world.                                    | a | b |
|    | b. | Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.           |   |   |
| 5. | a. | The idea that teachers are unfair to students is nonsense.  | a | b |
|    | b. | Most students don't realize the extent to which their grades are influenced by accidental happenings. |   |   |
| 6. | a. | Without the right breaks one cannot be an effective leader.   | a | b |
|    | b. | Capable people who fail to become leaders have not taken advantage of their opportunities.            |   |   |



- |     |    |  |   |   |
|-----|----|--|---|---|
| 7.  | a. | No matter how hard you try some people just don't like you.  | a | b |
|     | b. | People who can't get others to like them don't understand how to get along with others.                        |   |   |
| 8.  | a. | Heredity plays the major role in determining one's personality.  | a | b |
|     | b. | It is one's experience in life which determine what they're like.  |   |   |
| 9.  | a. | I have often found that what is going to happen will happen.   | a | b |
|     | b. | Trusting to fate has never turned out as well for me as making a decision to take a definite course of action. |   |   |
| 10. | a. | In the case of the well-prepared student there is rarely if ever such a thing as an unfair test.               | a | b |
|     | b. | Many times exam questions tend to be so unrelated to course work that studying is really useless.              |   |   |
| 11. | a. | Becoming a success is a matter of hard work, luck has little or nothing to do with it.                         | a | b |
|     | b. | Getting a good job depends mainly on being in the right place at the right time.                               |   |   |
| 12. | a. | The average citizen can have an influence in government decisions.   | a | b |
|     | b. | The world is run by the few people in power, and there is not much the little guy can do about it.             |   |   |





13. a. When I make plans, I am almost certain that I can make them work. a b
- b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
14. a. There are certain people who are just no good. a b
- b. There is some good in everybody.
15. a. In my case getting what I want has little or nothing to do with luck. a b
- b. Many times we might just as well decide what to do by flipping a coin.
16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first. a b
- b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control. a b
- b. By taking an active part in political and social affairs the people can control world events.
18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings. a b
- b. There really is no such thing as "luck".
19. a. One should always be willing to admit mistakes. a b
- b. It is usually best to cover up one's mistakes.





20. a. It is hard to know whether or not a person really likes you. a b
- b. How many friends you have depends upon how nice a person you are.
21. a. In the long run the bad things that happen to us are balanced by the good ones. a b
- b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
22. a. With enough effort we can wipe out political corruption. a b
- b. It is difficult for people to have much control over the things politicians do in office.
23. a. Sometimes I can't understand how teachers arrive at the grades they give. a b
- b. There is a direct connection between how hard I study and the grades I get.
24. a. A good leader expects people to decide for themselves what they should do. a b
- b. A good leader makes it clear to everybody what their jobs are.
25. a. Many times I feel that I have little influence over the things that happen to me. a b
- b. It is impossible for me to believe that chance or luck plays an important role in my life.
26. a. People are lonely because they don't try to be friendly. a b
- b. There's not much use in trying too hard to please people, if they like you, they like you.



27. a. There is too much emphasis on athletics in high school. a b
- b. Team sports are an excellent way to build character.
28. a. What happens to me is my own doing. a b
- b. Sometimes I feel that I don't have enough control over the direction my life is taking.
29. a. Most of the time I can't understand why politicians behave the way they do. a. b
- b. In the long run the people are responsible for bad government on a national as well as on a local level.



## CALIFORNIA PSYCHOLOGICAL INVENTORY

This test contains 480 forced choice items (12 duplicated items). The client is to mark these true or false as applied to him/her. The answers yield 18 standard scores, each on a scale intended to cover an important facet of interpersonal psychology. " The set of 18 scales is intended to provide a comprehensive survey of an individual from this social interaction point of view." (Gough,1957). The scales are grouped into four major categories.





CODE # \_\_\_\_\_

If you had to choose between the two therapists you have just seen, to solve your own problems, which one would you choose? Please circle your answer.

Dr. Rogers

Dr. Ellis



THE CANADIAN MENTAL HEALTH ASSOCIATION IN NOVA SCOTIA  
PRESENTS

T H E R A P Y     -     3

R O G E R S

P E R L S

E L L I S

These films are made available by the Canadian Mental Health Association  
as part of its ongoing programme of public and special education.



## THREE APPROACHES TO PSYCHOTHERAPY - A FILM SERIES

Film No. 1: Includes general introduction to the film series, and  
48 min. a description of client-centred therapy as developed  
by Dr. Carl Rogers.

Film No. 2: Contains the interview by Dr. Frederick Perls who  
50 min. developed the Gestalt approach to psychotherapy.

Film No. 3: Featured Dr. Albert Ellis, whose approach is described  
50 min. as rational-emotive psychotherapy. In the final film  
the patient describes her experiences during the  
interviews with the three therapists.



## GESTALT THERAPY

Frederick Perls and his co-workers have attempted to apply the principles of Gestalt Psychology to the practice of psychotherapy. The Gestalt school of psychology originated in Germany and was concerned with the study of perception. This concern was extended to how man perceives himself, his fellow man, and his place in the environment. Gestaltists contend that in the process of growing up and living in a particular culture, man's thinking, feeling, and acting may become fragmented. That is, he acts in ways that are not consistent with his basic beliefs, or with his feelings. Gestalt therapy is aimed at redeveloping a "unitary outlook" - at helping the individuals to change either his beliefs, or his feelings, or his behaviour so that there is no longer this conflict or 'dualism',

Gestalt psychotherapists utilize ideas and techniques from other systems of psychotherapy, but they try to bring new meaning to these ideas and methods by putting them into a Gestalt frame of reference. Gestalt psychologists focus on the interplay between the individual and his environment. They call this interplay the "figure-ground relationship."

## CONDITIONS FOR THERAPEUTIC CHANGE

Perls believed that therapy sessions should be experimental situations. Rather than making implicit or explicit demands on the patient (as for example does Albert Ellis with his "homework assignments"), Perls and his colleagues present their patients with a series of graded experiments which are designed to bring difficulties to the attention of the patients. These experiments require the patient to try to recall past experiences, to feel sensations in his body, etc. In this way, the Gestalt therapist tries to make his patient aware of the way he walks, dreams, talks, fantasys, and remembers. During the experiments, the patient becomes aware of inabilities (similar to Freudian resistances) to carry out the suggested experiments fully and successfully. Such experiments confront the patient directly with gaps in his experiences and awareness. He discovers these gaps on his own rather than having them pointed out to him by the therapist.

Gestalt therapists contend that it is more effective for the patient to discover deficiencies himself than it is to have them pointed out to him. The therapist helps the patient to learn (through the experiments) how the patient is out of contact with reality, what reality is, and how to keep in contact with it. There is considerable focus on non-verbal aspects of the patient's behaviour; on his gestures, mannerisms, movements, postures, etc.

## RECOMMENDED BASIC READING

Perls, F., et al Gestalt Therapy. New York: Julian Press, (1951)





## NON-DIRECTIVE (Client Centred) PSYCHOTHERAPY

### OVERVIEW

Carl Rogers obtained an undergraduate education in theology at Union Theological Seminary, and then studied clinical psychology at the Teacher's College of Columbia University. He brought to his first full-time job (Director of the Rochester Guidance Centre) a strong personal and professional belief in permissiveness. Rogers based this permissive attitude on the idea that his clients had basic potentialities within them for growth and development which would be released in a therapeutic atmosphere in which the clients felt free to explore their attitudes and beliefs, to acquire deeper understanding of themselves and gradually to reorganize perceptions of themselves and the world around them. Rogers left Rochester in 1940, and went into clinical and administrative work at several universities. During this time, he trained many graduate students in his basic approach to psychotherapy, developed a theory of personality which corresponded to the therapy, stimulated a great deal of research, and contributed substantially to the professional literature.

Roger's approach was popular for several reasons. First, it fitted the American democratic tradition since the client and the therapist were considered equals and it was assumed that the patient had within himself the power to alleviate his own distresses. Second, Client-centred Therapy was in harmony with the optimistic aspect of American culture which said that with determination and good will every individual can overcome the adversities in his life. Third, Roger's approach appealed to young, insecure, and inexperienced therapists because it was the easiest system of therapy to master and utilize. Fourth, at least in its early years the method promised swifter changes in personality than did psychoanalysis and other methods. Finally, Client-centred Therapy had a basic appeal to American psychologists because it was not phrased in foreign terms and methods, and because it could be researched more easily than could other methods.

### CONDITIONS FOR PSYCHOTHERAPEUTIC CHANGE

Rogers believed that diagnosis of any type (using psychometric tests, interviews, etc.,) is not only unnecessary, but unwise and detrimental. In the Client-centred process, all responsibility for the course and the direction of the therapy is left to the client. However, before change can occur, certain conditions must be met. First, the client and the therapist must be aware of one another; there must be psychological contact. Second, for psychotherapeutic change to occur, there must be a difference between the way the client perceives himself and the way he would like to perceive himself. Third, the therapist must be freely, deeply, and genuinely himself as he participates in the therapeutic experience; he must not act out some artificial role of "the therapist". Fourth, the therapist must experience unconditional positive regard for his client. Fifth, the therapist must understand the client's emotions, let the client know that he understands, but keep his own emotional existence separate from that of the client. Finally, the client must perceive some degree of acceptance from and understanding by the therapist.

### RECOMMENDED BASIC READING

Rogers, C.R. Client-centred therapy. Boston: Houghton-Mifflin, (1951)





## RATIONAL-EMOTIVE PSYCHOTHERAPY

### OVERVIEW

Albert Ellis is a New York clinical psychologist and former psychoanalyst. His theory and method of psychotherapy, however, are repudiations of his earlier psychoanalytic orientation. His system of Rational-emotive Psychotherapy is based on the idea that human emotion is largely caused and controlled by thinking. According to Ellis, much of what is termed "emotional" is really a biased, prejudiced, or strongly evaluative type of thought. Thought usually takes place in terms of language. The person who feels positive emotions such as love or elation usually is saying to himself (consciously or unconsciously) some sentence to the effect that, "this is good". In negative emotions such as anger or depression, the individual is saying to himself some variation of the sentence, "this is terrible". Ellis believes that if adults did not employ such sentences, much emotional behaviour simply would not exist.

If human emotions are mostly the result of thinking, then it should be possible to change how an individual feels by teaching him to control his thoughts. Ellis, through his system of psychotherapy, tries to help his patients change their feelings from negative to positive (or to neutral) by changing the internalized self-talk which they used to create the feelings in the first place. The R-E therapist teaches his patients to understand how they create their own emotional reactions by telling themselves things, and how they can create different emotional reactions by telling themselves other things. The stress in this type of therapy is on the present rather than on the past. R-E therapists assume that most illogical ideas are learned and can be unlearned; they believe that biological limitations are of much less importance than are learned limitations. This type of therapy is directive in that R-E therapists challenge, encourage, persuade, and at times command patients to live more effectively.

### CONDITIONS FOR THERAPEUTIC CHANGE

According to Ellis, there are several conditions that must occur before therapeutic change can take place. First, the patient must be able to "tune in" on the silent sentences he is telling himself. Second, he must be able to see the illogical nature of many of these sentences. Third, he must be able to substitute reasonable and rational sentences for the illogical ones. Finally, he must be able to apply what he has learned to real-life situations; he is given "homework assignments" by the R-E therapist in which the patient must utilize the insights he has gained in therapy to cope more effectively with his environment.

### RECOMMENDED BASIC READING

Ellis, A. Reason and emotion in psychotherapy. New York: Lyle Stuart, (1962)

Ellis, A. The theory and practice of rational-emotive psychotherapy. New York: Lyle Stuart, (1964)



APPENDIX C  
CORRESPONDENCE





AABAC

## Alberta alcoholism &amp; drug abuse commission

IN YOUR REPLY PLEASE REFER TO

OUR FILE No.

YOUR FILE No.

Date July 15, 1977

Dr. Mansell Pattison,  
Department of Psychiatry  
and Human Behavior,  
University of California,  
IRVINE, California. U.S.A.

Dear Dr. Pattison:

This fall I will be taking a seven month leave of absence from my present position of "Education Counsellor" with the Alberta Alcoholism and Drug Abuse Commission. My aim is to complete my masters degree in Educational Psychology. Over the past few months and particularly after reading your article entitled "A Conceptual Approach to Alcoholism Treatment Goals," I have become enthused by the idea of matching clients to treatment.

Our Provincial Government through A.A.D.A.C. makes available to the public a wide range of treatment services including detoxification centres, out-patient clinics, in-patient treatment services, halfway houses, preventative programs, impaired driving programs. In addition, there are a wide variety of programs offered within each of our clinics, including individual counselling, group therapy, recreational therapy, lectures, as well as medical assessment. Further to these services we work in close co-operation with Alcoholics Anonymous, Al-Anon and Al-Ateen. While I feel these programs are worthwhile, I also feel they could be greatly improved upon in terms of their overall success if we could assess individuals who enter treatment, and based upon this assessment refer the person to the most appropriate facility.

I have recently read your article "Rehabilitation of the Chronic Alcoholic" where you wrote, "It may be possible to match a certain type of patient with a certain type of treatment." You also allude to an unpublished study of 600 alcoholics over a five-year period which seems to have relevance to this topic.

Presently I envision a study where I would compare the success of patients who were "matched" to treatment with the success of patients who received what is presently available (no objective matching criteria used.) I would appreciate receiving further suggestions and material from you relative to this study, specifically:



- 1/ Any pertinent readings which you may have related to the topic.
- 2/ Do you presently employ any questionnaires to determine the type of treatment which would be most suitable for a particular individual.
- 3/ Would it be possible for me to see the unpublished study you mention.

Any information you could provide me with relative to this topic would be greatly appreciated. I would also hope that I could contact you again as this study begins to take shape.



## UNIVERSITY OF CALIFORNIA, IRVINE

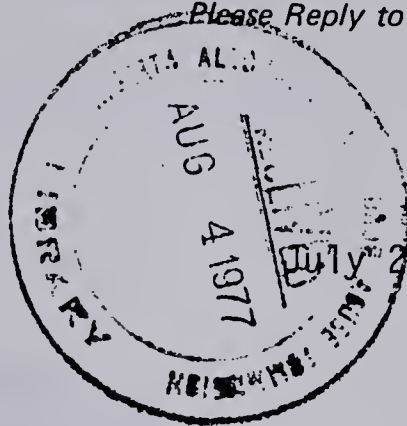
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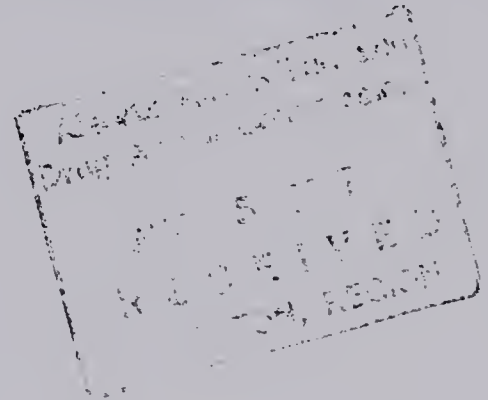
SANTA BARBARA • SANTA CRUZ

DEPARTMENT OF PSYCHIATRY AND  
HUMAN BEHAVIOR

Please Reply to:

California College of Medicine  
University of California Irvine Medical Center  
101 City Drive South  
Orange, California 92668

July 28, 1977

Dr. J. Mitchell  
Alberta Alcoholism & Drug Abuse  
Commission  
10050 - 112 Street  
Edmonton, Alberta CANADA T5K 1LG

Ref: Your letter of July 15, 1977

Dear Mr. Mitchell:

Thank you for your recent kind letter in regard to my work on alcoholism. Unfortunately, I am afraid I am not going to be of too much help to you. My unpublished long-term follow-up study is not in draft form yet, with the data sitting on my desk. There are really no good methods that I know of yet to match clients with treatment. Nor are there any good instruments or questionnaires to help in the task. That is a real need, but no one has come up with anything yet. The papers you have contain probably all of the pertinent references.

Perhaps during your leave you will be able to advance our clinical ability with your work. I would be pleased to hear from you.





Alberta alcoholism & drug abuse commission

10409 - 100 Avenue, Edmonton, Alberta T5J 0A3

IN YOUR REPLY PLEASE REFER TO

OUR FILE No.

YOUR FILE No.

Date June 14, 1978

Mrs. Betty Campbell  
Psychological Films Inc.  
1215 - East Chapman Ave.  
Orange, California  
92666

Dear Mrs. Campbell,

I am a graduate student in the department of Educational Psychology at the University of Alberta. Presently, I am working on my M.ed Thesis. As part of the thesis, I would like to use portions of 2 films from "Three Approaches to Psychotherapy" (Rogers, Ellis). Excerpts would be transferred to videotape and would be used only for the study. I would like permission to use portions of the films for this project.

My main problem is time; since I am making use of questionnaires and films, I would like to cut down the viewing time of the films to a minimum of 1 hour for both.

You will find enclosed a copy of an article by Fredrich W. Obitz, Ph.D. My idea for part of the project was based upon this study.

Your name was provided by Mr. Murray Sweigman, the President of International Telefilm Enterprises.

I would like a reply as soon as possible.







## PSYCHOLOGICAL FILMS, INC.

100 N. WHEELER ST., ORANGE, CA. 92669 (714) 639-4646

June 27, 1978

John Mitchell  
Education Consultant  
Community Extension Services  
Alberta Alcoholism & Drug Abuse Commission  
10409 - 100 Ave.  
Edmonton, Alberta T5J 1A3  
Canada

Dear Mr. Mitchell:

Your letter of June 14th has been forwarded to us at our correct address above.

We have strict rules regarding copying of our films and must consider each request individually. In your case, we would allow you to transfer the Rogers and Ellis versions of "Three Approaches to Psychotherapy" and use them for your study providing you will send them to us when it is completed. This will assure us that they will go no further.

Please write us again if you agree with this suggestion. We would also like to know to whom you will be showing these tapes, the numbers of persons and the time span.

We will look forward to hearing from you again.



ADAC  
berta alcoholism & drug abuse commission  
10409 - 100 Avenue, Edmonton, Alberta T5J OA3

IN YOUR REPLY PLEASE REFER TO

OUR FILE No.

YOUR FILE No.

Date June 14, 1978

Frederich W. Obitz, Ph.D.  
Veterans Administration Hospital  
Phoenix, Arizona

Dear Dr. Obitz,

I am a graduate student in the department of Educational Psychology at the University of Alberta. Presently, I am working on my M.ed thesis. Part of this project involves using two films from "three appraoches to Psychotherapy" and the 32 item questionnaire as mentioned in your study "Alcoholic's Perceptions of Selected Counselling Techniques".

Could you provide me with a copy of:

- 1) the actual questionnaire you employed,
- 2) further details that would allow me to replicate the study including instructions,
- 3) details about education level of subjects.

I am concerned that some of the adjectives in the questionnaire would be too difficult for some of the clients I would be testing.

Any information you would provide would be appreciated.







# MEMORANDUM

## ALCOHOLISM AND DRUG ABUSE COMMISSION

FROM John Mitchell  
Educational Consultant  
Community Extension Services

OUR FILE REFERENCE

YOUR FILE REFERENCE

TO Dennis Jones  
Treatment Supervisor  
Henwood Treatment Program

DATE October 27, 1978

TELEPHONE 427-4267

SUBJECT RESEARCH STUDY

Further to my conversation with you on Tuesday, October 24, 1978, when you noted the date of the next patient admission. As you are aware the M.Ed. thesis that I am presently working on involves an experimental and a control group. The experimental group would consist of those patients who are being admitted to the program on Nov. 6 and 7. The control group would include those patients who are on the waiting list for the December (?) admission. The latter group would be invited to a Henwood orientation early in November and would be asked prior to their arrival if they would participate on a study.

Before the study can begin, I would appreciate a reply to the following questions. I realize that I am asking a lot in a short period of time, however, I would like to collect this data before the new year.

- 1) Can I have your approval to conduct the study at Henwood?

For your information, patients who will be participating in the experimental group will be required to spend approximately 2½ hours (shortly after admission) and a similar amount of time (just prior to discharge) participating in the study. In order to maintain patient confidentiality they will be asked to identify themselves by using their social insurance number on both the pre and post tests. Social insurance numbers would be used only to identify a client on the pre and the post tests and would not be used in the thesis.

A similar amount of time and a similar procedure will be followed with the control group.

- 2) Do you foresee any problems if I invite those on the waiting list to attend an orientation at Henwood? For purposes of the study this group would have to be tested about the same time as the experimental group (or close to it).





- 2 -

- a) either the weekend before the 6 or 7th of November
- b) or the week of the 6th or 7th of November.

- 3) Would it be possible to serve coffee to this group?
- 4) What date would you recommend for the post-tests? Experimental group would have to be tested just prior to their discharge. The control group would be tested just after admission to the program in December.
- 5) Can I make use of information from patient records such as age, mental status, type of employment, number of years of drinking? This would not include any identifying information such as names.
- 6) Assuming I am unable to secure enough clients in November, can I test additional patients in January? What date would be best?
- 7) Since part of the study involves the use of video tape, could I make arrangements to use two 3/4 inch video machines on the days of the study?
 

		Henwood Program	
<u>Experimental</u>	Pre-test	28 days	Post test
		No Henwood Program	
Control	Pre-test	28 days	Post test.
- 8) Which day and at what time could I test the experimental group (Pre-test)?
- 9) In order for me to contact those patients who will be assigned to the control condition I will require the names, addresses and telephone numbers of those patients who will be admitted at the beginning of December. Will this be possible? These individuals will be contacted by myself and another member of the Community Extension Services Staff. They will be invited to an orientation at Henwood and will be asked to participate in a research study. I am assuming that patients in this group will come from Edmonton and vicinity.
- 10) Could patients be informed upon admission that they will be participating in a research study? Of course someone with <sup>\*</sup>strong objections need not be included. I believe if stress is placed on the fact that such studies can improve upon future programs then most people will be receptive. They may also be informed that the study is being conducted by an AADAC staff member and that any information obtained will be held in confidence. No details of the study should be given.



- 3 -

Experimental and control group patients who are selected will include those patients who are being admitted to the Henwood program for the first time. In addition, they will be male and female patients who are being admitted primarily because of a drinking problem.

If you foresee any difficulties arising from any aspect of the study or if you require further information, please let me know. Due to the time restrictions, I would appreciate hearing from you as soon as possible.



ADAC

## berta alcoholism &amp; drug abuse commission

10409 - 100 Avenue  
EDMONTON, Alberta  
T5J 0A3

IN YOUR REPLY PLEASE REFER TO

OUR FILE No.

YOUR FILE No.

Date December 11, 1978

Dr. Benjamin Kissin  
Division of Alcoholism  
And Drug Dependence  
Department of Psychiatry  
State University of New York  
Downstate Medical Centre  
BROOKLYN, New York  
U. S. A.

Dear Dr. Kissin:

I would like your permission to reproduce the chart entitled "Alcoholism as a Symptom and Disease" which is illustrated on page 3 of Treatment and Rehabilitation of the Chronic Alcoholic, 1977. The chart would be included as part of my M. Ed. thesis which I am completing at the University of Alberta in Edmonton.





## Alberta alcoholism &amp; drug abuse commission

10409 - 100 Avenue  
EDMONTON, Alberta  
T5J 0A3

IN YOUR REPLY PLEASE REFER TO

OUR FILE No.

YOUR FILE No.

Date - December 11, 1978

M. M. Glatt  
St. Bernard's Hospital  
SOUTHALL, Middlesex  
England

Dear Dr. Glatt:

I would like to include your chart of "Alcohol Addiction and Recovery" in my M. Ed. thesis which I am presently completing at the University of Alberta. This chart was illustrated in "Group Therapy and Alcoholism".

I would be pleased if I could receive your permission to include this chart.







Kingston Hill  
Kingston upon Thames  
Surrey KT2 7LX  
Telephone: 01-549 9861

Medical Director  
Max M Glatt MD FRCP FRCPsych DPM

MMG/rc

J Mitchell, Esq.,  
Education Consultant,  
Community Extension Services,  
AADAC,  
10409 - 100 Avenue,  
EDMONTON,  
ALBERTA T5J 0A3.

22nd January, 1979.

Dear Mr Mitchell,

Thank you for your letter of 11th December, 1978.

You would have my permission to reproduce a chart in your thesis provided due acknowledgement was given to me and the Journal.

However, I should have thought you would be better advised to use a more up-to-date and correct version of the chart which appeared in my book 'A Guide to Addiction and Its Treatment'; Medical & Technical Publishing CO. Ltd., P.O. Box 55, St Leonard's House, St Leornardgate, Lancaster, England.





## MEMORANDUM

ALCOHOLISM AND  
DRUG ABUSE COMMISSION

FROM John Mitchell  
Consultant  
Community Extension Services

OUR FILE REFERENCE

YOUR FILE REFERENCE

TO Dennis Jones  
Treatment Supervisor  
Henwood

DATE December 12, 1978

TELEPHONE 427 - 4267

SUBJECT

I would like to express my appreciation to you and your staff for the excellent cooperation I received while I conducted my research project at Henwood. The evening staff consisting of Bernie, Jerry and Carolyn were especially helpful.

After the study is complete I will provide you with a summary of the findings.



APPENDIX D  
RAW DATA AND RESULTS





Subj. #	Age	I-E Scores		Rogers vs Ellis		Dominance		Sociability		Sense of-WB.		Sex	C=Complete IC=In "
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
S1	20	13	10	Ellis	Ellis	17	22	24	25	26	34	Male	C
S2	24	9	---	Rogers	---	33	--	32	--	26	--	Female	IC
S3	25	12	2	Ellis	Ellis	15	24	16	25	11	24	"	C
S4	29	13	10	Ellis	Ellis	19	18	17	15	19	15	"	C
S5	29	11	9	Ellis	Ellis	32	30	24	29	18	34	Male	C
S6	31	8	--	Rogers	----	16	--	12	--	33	--	female	IC
S7	32	18	18	Ellis	Ellis	21	22	25	24	29	26	Male	C
S8	32	14	12	Rogers	Ellis	22	19	22	23	12	20	"	C
S9	34	10	7	Ellis	Ellis	25	30	22	19	28	36	Female	C
S10	35	5	3	Ellis	Rogers	31	32	24	25	24	27	Male	C
S11	37	10	--	Rogers	---	14	--	15	--	15	--	"	IC
S12	37	4	3	Ellis	Rogers	19	33	13	24	23	38	Male	C
S13	38	8	--	Rogers	---	27	--	20	--	36	--	"	IC
S14	39	10	4	Ellis	Ellis	21	35	15	26	26	30	"	C
S15	41	3	--	Ellis	---	33	--	24	--	33	--	"	IC
S16	41	5	1	Ellis	Rogers	29	35	17	19	33	33	Female	C
S17	45	9	6	Ellis	Ellis	17	15	6	11	28	26	"	C
S18	47	12	--	Ellis	---	22	--	23	--	22	--	Male	IC
S19	48	3	5	Ellis	Ellis	26	26	26	23	32	34	"	C
S20	48	10	--	Ellis	---	24	--	18	--	36	--	"	IC
S21	50	10	--	Rogers	---	24	--	19	--	34	--	"	IC



R A W D A T A - Experimental Group 1 Cont'd.

Subj. #	Age	I-E scores		Rogers vs Ellis		Dominance		Sociability		Sense of-WB		Sex	C=Complete IC=In "
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
S22	55	7	7	Ellis	Rogers	26	24	24	21	40	39	Male	C
S23	56	8	--	Ellis	Rogers	20	--	13	--	23	--	"	IC
S24	56	11	--	Ellis	---	22	--	15	--	39	--	"	IC
S25	56	10	14	Ellis	Ellis	12	16	8	13	28	28	Female	C
S26	56	10	12	Ellis	Ellis	22	23	20	19	36	34	"	C
S27	63	5	4	Ellis	Ellis	17	25	26	27	38	43	Male	C
S28	64	7	8	Ellis	Rogers	17	21	17	17	30	29	"	C



Subj.#	Age	R A W D A T A - Experimental Group 2										Sex	C=Complete IC=In "
		I-E scores		Rogers vs Ellis		Dominance		Sociability		Sense of-WB.			
		Pre	post	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
S1	18	10	9	Rogers	Rogers	22	19	24	21	41	41	Male	C
S2	23	10	10	Ellis	Ellis	22	26	24	24	14	13	Female	C
S3	29	1	0	Rogers	Ellis	24	30	20	21	28	34	Male	C
S4	30	5	4	Ellis	Ellis	30	36	29	32	36	37	Male	C
S5	30	6	9	Ellis	Ellis	18	25	14	19	27	22	Female	C
S6	31	7	5	Ellis	Ellis	23	26	24	26	26	31	Male	C
S7	32	13	11	Ellis	Rogers	17	22	24	24	32	31	Male	C
S8	32	10	11	Ellis	Ellis	19	20	11	14	37	23	Male	C
S9	34	9	8	Ellis	Ellis	25	22	27	23	33	33	Female	C
S10	35	10	11	Rogers	Ellis	25	24	24	25	30	32	Male	C
S11	36	5	--	Ellis	--	--	--	--	--	--	--	Male	IC
S12	39	12	4	Rogers	Rogers	22	23	20	28	35	35	Male	C
S13	40	13	8	Ellis	Ellis	22	21	12	12	34	30	Male	C
S14	41	8	5	Rogers	Rogers	25	35	15	23	30	38	Female	C
S15	42	3	3	Ellis	Ellis	16	19	16	17	31	34	Female	C
S16	45	7	9	Ellis	Ellis	23	19	23	21	31	32	Male	C
S17	46	7	8	Ellis	Rogers	20	20	21	23	25	28	Male	C
S18	47	9	9	Ellis	Rogers	--	22	--	22	--	22	Male	IC
S19	48	5	2	Rogers	Ellis	20	21	26	23	34	36	Male	C
S20	51	2	4	Ellis	Ellis	27	27	24	28	39	37	Male	C
S21	52	12	12	Ellis	Rogers	17	14	17	17	24	26	Male	C
S22	54	7	6	Ellis	Ellis	16	17	15	21	27	32	Male	C



## R A W D A T A - Experimental group 2 Cont'd.

Subj. #	Age	I-E scores		Rogers vs Ellis		Dominance		Sociability		Sense of WB.		Sex	C=Complete IC=In "
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
S23	55	11	9	Ellis	Ellis	16	18	22	17	26	25	Male	C
S24	56	10	14	Rogers	Ellis	27	30	19	18	31	33	Male	C
S25	57	4	3	Ellis	Ellis	20	21	16	17	32	36	Male	C
S26	61	11	8	Ellis	Rogers	21	23	19	19	32	35	Male	C
S27	63	4	4	Ellis	Ellis	37	38	28	29	44	41	Male	C





Subj. #	Age	I-E scores		Rogers Vs Ellis		Dominance		Sociability		Sense of-WB		Sex	C=Complete IC=In "
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
SC1	20	13	7	Ellis	Ellis	18	23	14	23	32	20	Male	C
SC2	22	16	16	Rogers	Rogers	25	24	24	24	36	35	Male	C
SC3	26	9	11	Rogers	Ellis	22	23	20	17	34	34	Male	C
SC4	27	6	1	Rogers	Rogers	28	31	26	24	39	37	Male	C
SC5	28	9	--	Ellis	---	18	--	16	--	21	--	Male	IC
SC6	33	6	6	Ellis	Ellis	31	35	27	30	38	37	Male	C
SC7	33	4	7	Ellis	Ellis	20	13	17	17	31	26	Male	C
SC8	34	12	12	Ellis	Ellis	15	15	21	21	16	16	Female	C
SC9	36	14	7	Ellis	Ellis	10	10	14	8	15	20	Male	C
SC10	38	7	7	Ellis	Ellis	29	22	12	18	34	30	Male	C
SC11	39	3	3	Rogers	Rogers	34	35	30	28	38	40	Male	C
SC12	40	11	6	Rogers	Rogers	19	25	16	13	18	23	Male	C
SC13	41	6	6	Rogers	Rogers	18	21	27	26	32	32	Female	C
SC14	42	5	8	Rogers	Rogers	28	33	27	28	42	39	Male	C
SC15	43	9	7	Ellis	Ellis	37	32	21	21	24	28	Male	C
SC16	44	11	6	Rogers	Rogers	35	33	31	30	34	37	Male	C
SC17	44	9	11	Ellis	Ellis	24	26	26	26	42	42	Female	C
SC18	45	2	3	Ellis	Rogers	27	35	19	30	29	35	Male	C
SC19	45	6	9	Rogers	Rogers	38	35	27	24	29	33	Female	C
SC20	45	8	4	Rogers	Rogers	24	26	22	21	31	40	Male	C
SC21	45	9	10	Ellis	Ellis	29	27	23	14	26	32	Male	C
SC22	48	8	8	Rogers	Rogers	31	27	26	21	33	32	Male	C



## R A W D A T A - Control Group Cont'd.

Subj.#	Age	I-E scores		Rogers vs Ellis		Dominance		Sociability		Sense of-WB.		Sex	C=Complete IC=In "
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
SC23	49	8	5	Ellis	Rogers	20	19	19	19	35	30	Male	C
SC24	57	10	6	Ellis	Ellis	26	26	25	25	38	37	Male	C
S025	57	4	6	Rogers	Ellis	29	29	28	31	42	40	Male	C



TABLE 12  
A TWO WAY ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR CPI DOMINANCE SCORES ON THE PRE AND POST TESTS

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>DF</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>Probability of Significance</u>
Between subjects	4813.25	66			
"A" main effects	244.88	2	122.44	1.72	0.1869
Subjects within groups	4551.94	64	71.12		
Within subjects	707.50	67			
"B" main effects	100.09	1	100.09	11.51	0.0012 *
'A*B' interaction	68.33	2	34.16	3.93	0.0245 *
'B' x subjects within groups	556.44	64	8.69		

p 0.1869 not significant at the .01 level  
 \* p 0.0012 significant at the .01 level  
 \* p 0.0245 significant at the .05 level

"A" main effects = Group  
 "B" main effects = Pre-Post Tests





TABLE 13

A TWO WAY ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR CPI SOCIABILITY SCORES ON THE PRE AND POST TESTS

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>DF</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>Probability of Significance</u>
Between subjects	3247.82	66			
"A" main effects	114.78	2	57.39	1.17	0.3166
Subjects within groups	3136.01	64	49.00		
Within subjects	612.00	67			
"B" main effects	39.01	1	39.01	4.54	0.0369 *
'A*B' interaction	31.59	2	15.79	1.84	0.1671
'B' x subjects within groups	549.45	64	8.59		

p 0.3166 not significant at the .01 level  
 \* p 0.0369 significant at the .05 level  
 p 0.1671 not significant at the .05 level

"A" main effects = Group  
 "B" main effects = Pre-Post Tests



TABLE 14

A TWO WAY ANALYSIS OF VARIANCE WITH REPEATED MEASURES FOR  
CPI SENSE OF WELL-BEING SCORES ON THE PRE AND POST TESTS

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>DF</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>Probability of Significance</u>
Between subjects	5760.75	66			
"A" main effects	303.34	2	151.67	1.77	0.1787
Subjects within groups	5485.81	64	85.72		
Within subjects	937.00	67			
"B" main effects	82.75	1	82.75	6.63	0.0123 *
'A*B' interaction	83.27	2	41.75	3.34	0.0418 *
'B' x subjects within groups	798.63	64	12.48		

p 0.1787 not significant at the .05 level

\* p 0.0123 significant at the .01 level

\* p 0.0418 significant at the .05 level

"A" main effects = Group

"B" main effects = Pre-Post Tests



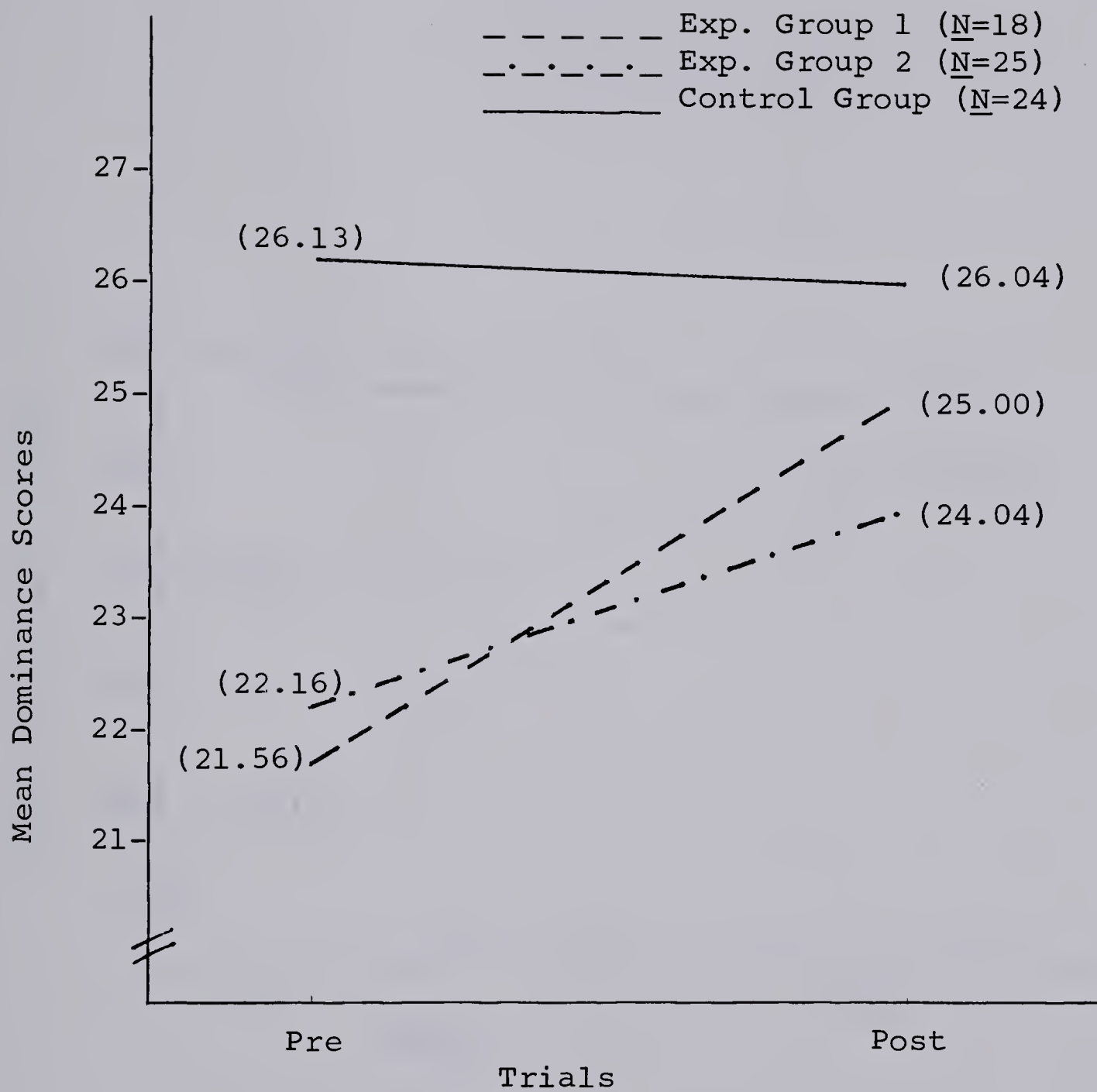


FIGURE 12

Graph Showing a Comparison of the Pre and Post-Test  
Mean Dominance Scores for Each of the Three Groups



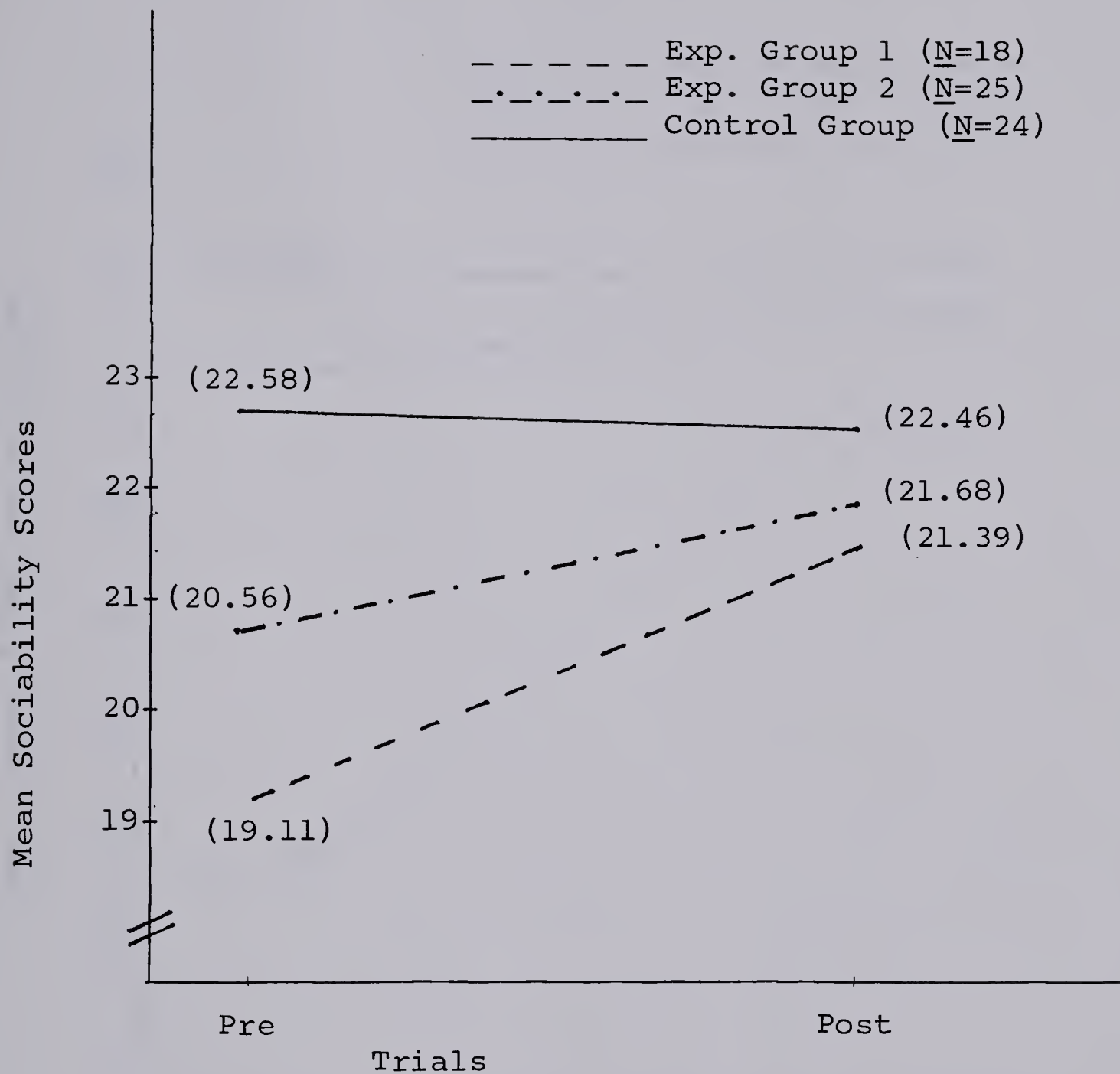


FIGURE 13

Graph Showing a Comparison of the Pre and Post-Test Mean Sociability Scores for Each of the Three Groups





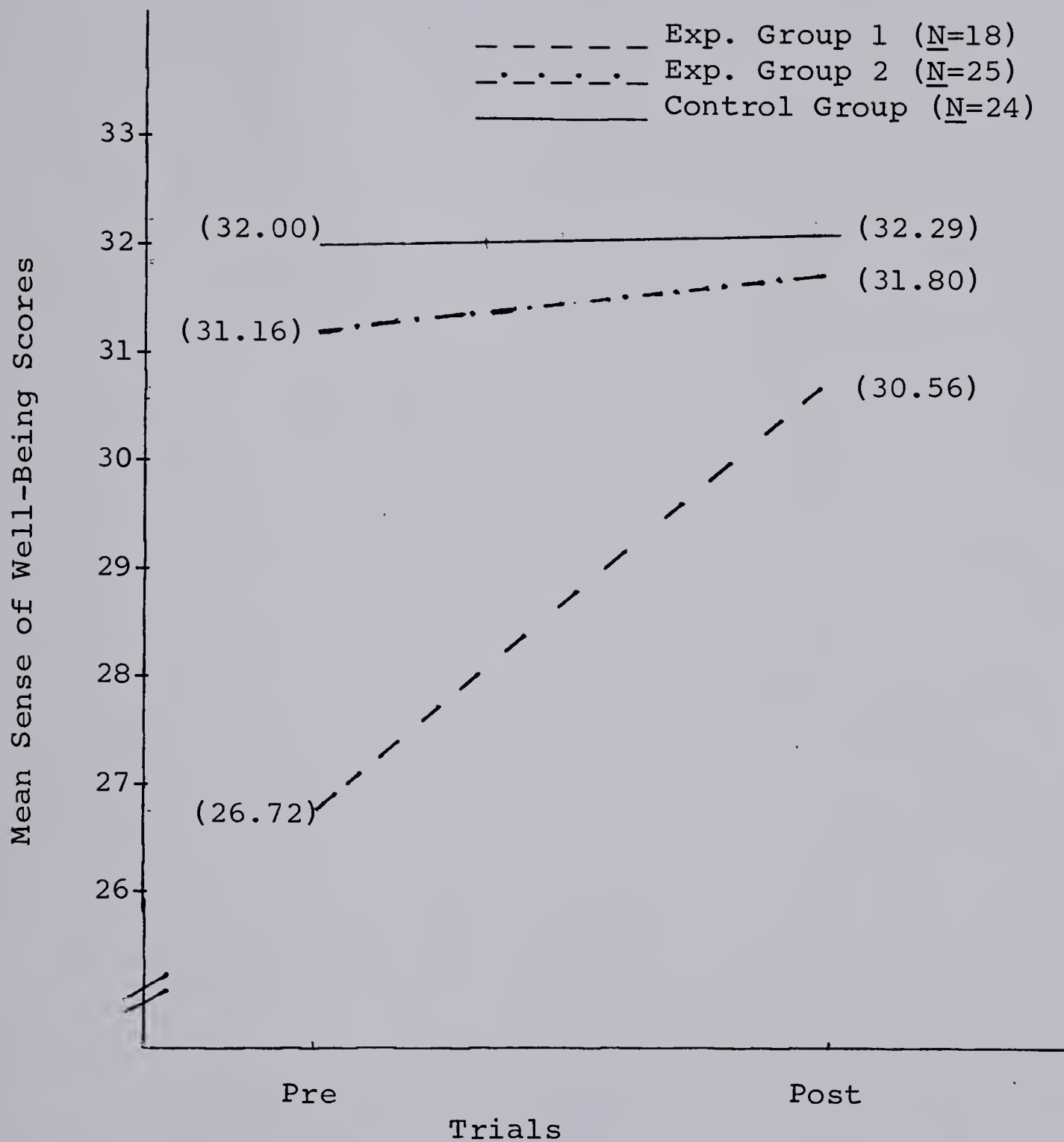


FIGURE 14

Graph Showing a Comparison of the Pre and Post-Test Mean Sense of Well-Being Scores for Each of the Three Groups







**B30253**